2007
Site Monitoring Report

North Indian Bend Wash Superfund Site

Prepared for:

U.S. Environmental Protection Agency
Region IX

Prepared by:

NIBW Participating Companies

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CERTIFICATION

All geological information, conclusions, and recommendations in this document have been prepared under the supervision of and reviewed by a Registered Geologist.

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North Indian Bend Wash Superfund Site

ANNUAL SITE MONITORING REPORT
January - December 2007

North Indian Bend Wash Superfund Site
Scottsdale, Arizona

The 2007 Site Monitoring Report summarizes remedial activities performed and data collected by the North Indian Bend Wash Participating Companies (Motorola, Siemens, and GlaxoSmithKline) and Salt River Project (SRP) pursuant to the Amended Consent Decree, CV-91-1835-PHX-FJM, entered by the U.S. District Court for the District of Arizona on June 5, 2003. A detailed summary of the components and work requirements of the remedial action program can be found in the Record of Decision Amendment – Final Operable Unit, Indian Bend Wash Area (Amended ROD), dated September 27, 2001 and Statement of Work (SOW), Appendix A to the Amended Consent Decree (Amended CD). An organizational chart identifying the key parties involved in the North Indian Bend Wash (NIBW) Superfund Site is provided in **Appendix A** along with current personnel having assigned roles and responsibilities for operations and emergency response.

Additional information describing remedial activities conducted at the North Indian Bend Wash Site in 2007 was provided in Quarterly Reports submitted to the U.S. Environmental Protection Agency (EPA) and Arizona Department of Environmental Quality (ADEQ) on May 31, August 29, and November 30, 2007. Consistent with requirements defined in the Amended CD and SOW, the 2007 Site Monitoring Report includes operational summaries and updates for fourth quarter 2007.

This 2007 Site Monitoring Report presents a tabulation and overview of compliance monitoring data acquired to ensure performance of the remedial action program. In conjunction with development of the 2007 Site Monitoring Report, the North Indian Bend Wash Participating Companies (NIBW PCs) and SRP have compiled compliance monitoring data and associated laboratory analytical reports and quality assurance reports required by the Amended CD, SOW, and governing work plans. The NIBW PCs are issuing two separate reports that transmit laboratory analytical reports and quality assurance information associated with the NIBW compliance data. The reports are submitted as read-only electronic files on compact disks and contain: 1) laboratory analytical reports and quality assurance report issued by Salt River Project for sampling and analysis conducted for the 2007 NIBW Groundwater Monitoring Program, and 2) laboratory analytical reports and quality assurance data issued by Transwest Geochem, Inc. for analysis of process water samples obtained in 2007 at NIBW groundwater treatment systems.

1.0 GROUNDWATER MONITORING AND EVALUATION PROGRAM

Groundwater monitoring at the NIBW Superfund Site includes collection, analysis, and reporting of extensive water level, water quality, and production data from a network of groundwater monitor, extraction, and production water wells completed in the Upper Alluvium Unit (UAU), Middle Alluvium Unit (MAU), and Lower Alluvium Unit (LAU). Locations of wells in the vicinity of the NIBW Site are shown on **Figure 1**. Groundwater monitoring requirements for the NIBW Site are specified in the Groundwater Monitoring and Evaluate Plan (GMEP), approved by EPA on October 8, 2002. The GMEP was prepared by the NIBW PCs and defines the: 1) scope and frequency of monitoring activities; 2) requirements for data reporting and preparation of interpretive work products; 3) approach to conducting groundwater model updates; and 4) performance criteria, achievement measures, contingency initiation criteria, and contingency response actions for evaluation of on-going effectiveness of remedial actions. SRP Environmental Laboratory and Field Services is the Supervising Contractor for NIBW Site groundwater monitoring program activities.

Property development in south Scottsdale impacted several locations of NIBW groundwater monitoring wells. Existing monitor wells M-12UA, M-12MA, and PA-8LA located at 3110 N. Hayden Road were impacted by subdividing private property owned by the Church of the Holy Cross. The MAU and LAU monitor wells on the property slated for residential development were formerly abandoned and replaced with wells of identical construction at an adjacent parking area on the Lutheran Church property. The replacement wells are designated as M-12MA2 and PA-8LA2. The UAU monitor well at this site was formally abandoned and not replaced. EPA approved abandonment of these three wells in a letter dated August 23, 2006. Existing monitor wells PG-35UA, PA-12MA, and PA-11LA located at Coronado High School were impacted by development of a new ball field where the wells were located. The MAU and LAU monitor wells at this site were modified at land surface to provide a lateral run of discharge piping from the dedicated submersible pumps to an alternate well access vault away from the ball field. The UAU monitor well was formally abandoned. EPA approved abandonment of PG-35UA in a letter dated August 23, 2006.

Seven additional UAU monitor wells were abandoned in 2007 including, E-11UA, M-6UA, M-7UA, M-8UA, PG-14UA, ST-2, and ST-3. EPA approved formal abandonment of these wells in a letter dated October 9, 2003. A close out report of the well abandonment activities will be provided to the NIBW Technical Committee.

1.1 GROUNDWATER LEVEL MONITORING

Groundwater level monitoring was conducted semi-annually in a network of 142 NIBW monitor wells in 2007. Water level data collected and reported by SRP in April and October are summarized in **Tables 1 and 2**, respectively. April and October 2007 water level contour maps for the UAU, MAU, and LAU, are shown on **Figures 2 through 7**. In addition to periodic water level monitoring conducted at unit-specific monitor wells, continuous water level monitoring is conducted at a select group of LAU monitor, production, and extraction wells in the vicinity of the Arizona American Water Company (AAWC) wellfield as part of the enhanced northern LAU monitoring program. Hydrographs showing continuous water level data for wells in the northern LAU monitoring program are provided in **Appendix B**.

Based on the 2007 water level contour maps (**Figures 2 and 5**), direction of groundwater movement in the UAU is from east to west in the area south of McDowell Road and from northeast to southwest in the vicinity of Thomas Road. UAU groundwater migrates from all directions toward the southwest margin of the site, where it moves vertically into underlying units. Horizontal hydraulic gradients are generally consistent for the two time periods (April and October 2007) and range from about 0.002 in the vicinity of the southwest margin to about 0.003 in the north.

The complex pattern of groundwater movement observed in the MAU results from competing influences between various pumping centers and the southwest margin, where vertical movement into the LAU occurs. These pumping centers will be discussed further in Section 1.3. Based on 2007 water level contour maps depicted in **Figures 3 and 6**, groundwater movement in the south part of the area is generally convergent toward Area 12 extraction wells and the southwest margin. Groundwater movement in the northern part of the area is generally convergent toward the Area 7 extraction wells, Central Groundwater Treatment Facility (CGTF) extraction wells, and the Arcadia Water Company (AWC) wellfield. Horizontal hydraulic gradients are generally consistent for the two time periods (April and October 2007) and range from about 0.008 in the north part of the site, where groundwater migrates toward Area 7 extraction wells and Operable Unit 1 (OU-1) extraction wells COS-71 and COS-72, to about 0.004 in the central part of the site, in the vicinity of the groundwater divide between the Area 7 and Area 12 extraction centers.

Groundwater movement in the LAU is generally from recharge areas located in the south and southwest to points of discharge from groundwater extraction and production wells to the north. Numerous wells, including CGTF extraction wells, Miller Road Treatment Facility (MRTF) extraction wells, and production wells operated by SRP, AWC, AAWC, and the City of Scottsdale (COS) withdraw groundwater from the LAU throughout the NIBW Site. The cone of depression created by pumping at MRTF extraction wells and nearby SRP and AAWC production wells represents a regional sink for LAU groundwater. These pumping centers will be discussed further in Section 1.3. Patterns of groundwater movement are generally consistent for both monitoring periods in 2007, although the horizontal hydraulic gradient increased somewhat to the south in October (**Figures 4 and 7**). Horizontal hydraulic gradients range from 0.005 in the area upgradient from OU-1 extraction well COS-75A to 0.02 in the area down-gradient from extraction well COS-75A and upgradient from MRTF extraction well PCX-1.

Change in groundwater level over time is evaluated using October 2006 to October 2007 groundwater level change and long-term water level data trends at UAU, MAU, and LAU monitor wells. **Table 3** summarizes the difference in water level between October 2006 and October 2007 for all monitor wells included in the 2007 water level monitoring program. Differences are illustrated using bar graphs on **Figures 8 through 10**. It should be noted that water level differences computed at individual wells using October 2006 and October 2007 data are representative of changes between two point measurements. Changes observed between these two points in time may not be reflective of long-term trends. Water level changes on the order of 10 feet or more are observed in monitor wells adjacent to extraction wells and attributed to production well cycling rather than to water level conditions in the aquifer. Accordingly, water level data trends are more accurately tracked by reviewing a larger set of water level data obtained over a longer time period. Hydrographs showing water level data from 1997 through 2007 for wells included in the monitoring program are provided in **Appendix C**.

In the time period from October 2006 to October 2007 water levels mostly increased in UAU and MAU monitor wells. Water levels increased in all LAU monitor wells during the period October 2006 to October 2007 (**Figures 8 through 10**). Water level measurements in M-12 are considered to be anomalous readings and should not be considered the general trend for the area. The water level rise is presumed to be a regional trend likely associated with decreased area-wide groundwater withdrawals. The net effect of water level change range from approximately -3 to 7 feet in the UAU, from -24 to 28 feet in the MAU, and from 1 to 19 feet in the LAU when comparing October 2007 to October 2006 groundwater elevations.

1.2 GROUNDWATER QUALITY MONITORING

Groundwater quality monitoring of volatile organic compounds (VOCs) for NIBW contaminants of concern, including trichloroethene (TCE), tetrachloroethene (PCE), 1,1,1-trichloroethane (TCA), 1,1-dichloroethene (DCE), and chloroform CFM), was conducted in accordance with requirements of the GMEP. Water quality monitoring for the five NIBW VOCs for 2007 included the following components:

monthly sampling at four CGTF and three MRTF extraction wells, quarterly sampling at three Area 7 and two Area 12 extraction wells and in a network of 24 MAU and LAU monitor wells, and annual sampling in a network of 95 monitor wells. Monthly and quarterly groundwater quality monitoring is initiated during the first week of the month, beginning in January. The annual groundwater quality monitoring program is conducted in October.

A summary of laboratory chemical results for VOCs for NIBW monitor wells for October 2007 is provided in **Table 4**. Production and extraction well VOC results are summarized in **Table 5**. TCE concentration contours for October 2007 for the UAU, MAU, and LAU are shown on **Figures 11, 12, and 13**, respectively. Long-term TCE concentrations are shown on individual monitor well hydrographs given in **Appendix D**. Changes in TCE concentrations over the 6-year time period between the baseline dataset, October 2001, and October 2007 for the UAU, MAU, and LAU are shown on **Figures 14, 15, and 16**, respectively.

TCE concentrations in UAU monitor wells are generally small, with a maximum concentration in October 2007 of 43 micrograms per liter (μg/L) detected at well PG-31UA, located downgradient from Area 7 **(Figure 11)**. The occurrence of TCE concentrations in UAU groundwater in excess of the Federal Maximum Contaminant Level (MCL) of 5 μg/L is limited to discrete zones associated with Areas 6, 7, and 12. The magnitude and aerial extent of the zones of contamination in UAU groundwater have decreased with time as reflected in **Appendix D** and depicted in **Figure 14**, which compares the extent of TCE concentrations in UAU groundwater observed over the 6-year period between October 2001 and October 2007.

TCE concentrations in MAU groundwater are larger than in the other two units, with a maximum concentration of 4,100 μg/L detected in October 2007 at well

W-2MA, located downgradient from Area 7 (**Figure 12**). The maximum concentration of TCE detected in October 2007 in the vicinity of Area 12 is 120 µg/L at well M-6MA. The third area of elevated TCE concentrations in MAU groundwater coincides with the vicinity of the southwest margin. TCE concentration at well PG-6MA, located in this area, was 110 µg/L in October 2007.

Changes in the magnitude and extent of TCE concentrations in MAU groundwater observed over the 6-year period between October 2001 and October 2007 are generally small **(Figure 15)**. TCE concentrations in most areas are relatively similar between the two time periods. An area of apparent change that occurs near Scottsdale Road between Thomas and McDowell Roads is attributable to the availability of updated data from well M-17MA/LA.

TCE concentrations in LAU groundwater are intermediate between the UAU and the MAU, with a maximum concentration of 180 µg/L detected in October 2007 at well PA-5LA (**Figure 13**). The largest concentrations of TCE in LAU groundwater occur in the central part of the site in an area associated with CGTF extraction well COS-75A. Changes in the extent of TCE concentrations in LAU groundwater observed over the 6-year period between October 2001 and October 2006 are generally small **(Figure 16)** although the TCE concentrations have decreased in some areas within the plume. Decreases observed in the south part of the site and along the centerline of the plume are likely attributable to mass removal at extraction wells and the influx over time of UAU groundwater with progressively smaller concentrations of TCE. Increases observed to the north are attributable to planned migration of LAU mass toward PCX-1 and the MRTF extraction wells. As indicated above, apparent changes in the vicinity of well M-17MA/LA are attributable to the availability of new data at this well.

1.3 GROUNDWATER PRODUCTION DATA

Monthly data for total groundwater production were compiled for all wells that pump at rates in excess of 35 gallons per minute (gpm) and are located in the area bounded by Indian Bend Road on the north, 1 mile south of McKellips Road on the south, Dobson Road on the east, and Invergordon Road on the west. Monthly production data for 2007 are summarized in **Table 6**. Annual well production data for 2007 are summarized in **Table 7** and shown on **Figure 17**. Production data were obtained from municipal and private water providers, SRP, and Arizona Department of Water Resources (ADWR). Production data not available at the time of this report will be obtained from ADWR and included in the first 2008 Quarterly Report.

Review of monthly production data **(Table 6)** indicates seasonal trends in pumping in response to fluctuations in demand for groundwater. In general, maximum production for municipal demand corresponds to summer months while minimum production for municipal demand corresponds to winter months. Combined monthly pumping for all wells at the NIBW Site ranged from 692 acre-feet (AF) in February 2007 to 2,445 AF in May 2007.

Review of the spatial distribution of groundwater production for 2007 **(Figure 17)** indicates the presence of several pumping centers. The predominant pumping center is associated with the AAWC wellfield, located along the Arizona Canal in the area north and south of McDonald Road. Total production for 2007 at the six AAWC wells was 7,208 AF. SRP well 22.5E-9.3N (also known as well PCX 1) and SRP well 22.6E-10N pumped a total of 3,018 and 888 AF in 2007, respectively, and contribute to the pumping center in this area. Two of the AAWC wells (AAWC-14 and AAWC-15) and well PCX-1 (SRP 22.5E-9.3N) pump to the MRTF and serve as extraction wells for the northern LAU containment program. Total production for 2007 at the three MRTF extraction wells was 5,823 AF.

Pumping at AAWC and SRP wells in this area results in a regional cone of depression that controls patterns of groundwater movement in the LAU.

The AWC wellfield comprises another important pumping center in the vicinity of the NIBW site. Production data from AWC wells were not available at the time of this report and will be reported in the first 2008 Quarterly Report. Production at the four CGTF extraction wells (COS-31, COS-71, COS-72, and COS-75A) is the most significant pumping that occurs within the boundaries of the NIBW Site. Total production for 2007 at the CGTF extraction wells was 5,596 AF. Total production for the four CGTF wells in 2006 was 9,960 AF. The production total from the four CGTF extraction wells was lower in 2007 because the plant was generally off-line from February through most of June due to extensive CGTF preventative maintenance activities. Pumping associated with the Area 7 and Area 12 groundwater extraction and treatment programs is also fairly substantial, totaling 637 AF and 1,173 AF for 2007, respectively.

Table 7 summarizes annual groundwater production for wells in the vicinity of the NIBW site for the period 1991 through 2007. Review of temporal trends in annual groundwater production indicates that water demand has generally increased over time. From 1991 through 1995, groundwater production in the vicinity of the NIBW site ranged from about 10,000 to about 20,000 AF. From 1996 through 2004, groundwater production in the vicinity of the NIBW Site steadily increased to a level of around 40,000 AF. In the past three years, groundwater production in this area has declined to and less than about 30,000 AF per year. The increased groundwater withdrawals from the mid 1990s correlate to, among other factors, implementation of the NIBW groundwater remedy which allowed water providers to return wells to service. Additionally, groundwater pumping has increased since 1995 due to drought conditions in 10 of the last 12 years. The more recent decline in groundwater production is likely correlated to above normal precipitation and surface water runoff in 2005 and implementation of the new arsenic maximum contaminant level in 2006 which resulted in shut down of some COS wells.

2.0 GROUNDWATER REMEDIATION PROGRAM

As provided by the Amended CD, the NIBW remedy requires containment of the MAU/LAU zones of groundwater contamination and restoration of groundwater to drinking water standards. The groundwater remediation program consists of groundwater extraction and treatment at the CGTF, MRTF, Area 7, and Area 12. The location of the four groundwater extraction and treatment systems (GWETS) are shown on **Figure 18**. The NIBW PCs are responsible for the MRTF, Area 7, and Area 12 GWETS whereas the City of Scottsdale (COS) is responsible for CGTF operations.

On November 13 and December 13, 2007, the NIBW PCs coordinated inspections of the CGTF, MRTF, Area 7, and Area 12 GWETS in accordance with Section VI.B.4.d of the SOW. A representative of EPA participated in the site inspections. The facilities were inspected for malfunctions, deterioration, operator practices or errors, and discharges that may be causing or could result in a release of untreated groundwater. At each facility, the major system components were identified and examined for operability, condition of operating equipment, and management of untreated groundwater and residual materials. Additionally, operator practices related to system startup and shutdown, routine and non-routine maintenance, and sampling were reviewed with EPA. There were no deficiencies noted or hazards identified in the course of the inspections at Area 7, Area 12 and CGTF that would denote a problem achieving groundwater treatment performance standards or compliance with the Amended CD/SOW. The inspection at MRTF revealed some inconsistencies between operating data and information provided by the Arizona American Water operator. These inconsistencies included data gaps observed in air flow rate trends. This information may indicate that the logging utility in the computer or the air flow rate measurement/transmitting instruments were not working properly. AAW indicated that the flow rate transmitters were replaced in early December 2007. Based on the inspection, MRTF appeared to be operating in such a manner to achieve treatment performance standards and compliance with the Amended CD/SOW. Further details of the NIBW site inspections are described in the Inspection Report provided in **Appendix E**.

A monthly summary of groundwater production and estimated TCE mass removed from NIBW extraction wells is given in **Table 8**. It should be noted that estimates of mass removed by the individual extraction wells will not generally provide as accurate of an estimate as the overall mass removal reported by GWETS operators because there is typically more water quality data available for treatment systems than for individual extraction wells. This information is provided for comparison purposes.

To assure data quality and consistency associated with collection of compliance monitoring data at all four GWETS, the NIBW PCs and COS have contracted with Transwest Geochem, Incorporated of Phoenix, Arizona. Transwest Geochem is licensed by the Arizona Department of Health Services (ADHS) under analytical laboratory license number AZ0133. EPA approved the use of Transwest Geochem as part of the NIBW sampling program on March 20, 2003 following review and acceptance of Transwest Geochem's laboratory quality assurance plan. Transwest Geochem assures high quality data through internal and external system and analytical audits, participation in annual EPA approved water supply proficiency studies and internal method validation studies, multi-tiered data review, and detailed standard operating procedures and training programs. To assure lab performance and data quality for CGTF-contracted analyses, the COS and NIBW PCs conducted an annual audit of Transwest Geochem on November 27, 2007.

2.1 GROUNDWATER REMEDIATION AT THE CENTRAL GROUNDWATER TREATMENT FACILITY

The CGTF was the first GWETS constructed at the NIBW Site. The CGTF is located in Scottsdale, Arizona at 8650 East Thomas Road as shown on **Figure 18**. As required by the first NIBW consent decree, the NIBW PCs constructed the CGTF and transferred ownership to COS on March 18, 1994 at which time it came into service. The NIBW PCs and COS subsequently modified the CGTF and it has operated continuously since December 1995 to treat groundwater according to design specifications of the CGTF that were approved by EPA. Groundwater extraction is performed at four COS owned or contract supply wells designated as COS-31, COS-71, COS-72, and COS-75A. Extracted groundwater is pumped through approximately 18,000 feet of buried transmission pipelines to the CGTF where it is treated by air stripping. Treated groundwater from CGTF is either used as part of the COS drinking water supply or discharged to the SRP water distribution system in an irrigation lateral.

COS owns and operates the CGTF and reports results of laboratory testing and plant operations directly to ADEQ and EPA. A summary of the key operational results is as follows. Detailed reporting of the 2007 operational status, laboratory data, and system performance was provided by COS for the first three quarters of the year in CGTF Compliance Monitoring Reports (CMR) submitted on May 30, August 28, and November 28, 2007. The third quarter CMR was amended and resubmitted on January 28, 2008 along with the fourth quarter 2007 CGTF operational data.

2.1.1 2007 Overview

The CGTF underwent major rehabilitation beginning in February 2007 for preventative maintenance of all major mechanical systems at the plant. The rehabilitation project was conducted to ensure flexibility, reliability, and proper treatment performance and included:

- Installation of raw water surge protection,
- Relocation of raw water pipe from treated water sump,
- Refurbishment of column internals and coatings on walls,
- Upgrades to the air blower system,
- Upgrades to the column cleaning and discharge systems, and
- Repainting of the facility exterior.

Construction activities associated with the rehabilitation project were completed in August 2007, although treatment of groundwater from COS-75A and COS-71 commenced in June to support the groundwater remedy.

Groundwater extraction tied into the CGTF contributed to capture and containment of the MAU/LAU zone of contamination (as discussed in Section 4.2.2) and treatment provided water for beneficial use that met groundwater treatment performance standards (as discussed in Section 4.3.1).

COS reported 1.823 billion gallons of groundwater (5,596 AF) were pumped and treated at the CGTF in 2007. Of the total, 560 million gallons were extracted from well COS-75A, 493 million gallons from well COS-71, 460 million gallons from well COS-72, and 310 million gallons from well COS-31. Groundwater production from the COS extraction wells decreased in 2007 compared previous years on account of the major rehabilitation project. Based on extraction well data shown in **Table 8**, an estimated 1,099 pounds of TCE were removed at the CGTF during

2007. A tabulation of VOC concentrations for NIBW contaminants of concern (COCs) measured in CGTF extraction wells in 2007 is included in **Table 5**. Historical groundwater production and TCE concentrations at CGTF extraction wells are graphed in **Appendix G**. As demonstrated in CGTF operations reports and Compliance Monitoring Reports generated by COS, the CGTF consistently treated groundwater to levels that were safely below the drinking water standards for all NIBW COCs throughout 2007.

2.2 GROUNDWATER REMEDIATION AT THE MILLER ROAD TREATMENT FACILITY

The MRTF was constructed to capture and remove groundwater containing NIBW COCs in the northern LAU to prevent migration to peripheral production wells. The MRTF is located in Scottsdale, Arizona at 5975 North Miller Road as shown on **Figure 18**. Groundwater extraction is performed at two large capacity production wells designated as PCX-1 and AAWC-15 that are individually connected to MRTF by approximately 4,000 feet of buried piping. VOCs in groundwater are treated by air stripping. A third extraction well, AAWC-14, is also connected and available for treatment at MRTF should groundwater contamination from the NIBW Site reach this well. Treated groundwater from the MRTF is either used as part of the AAWC drinking water supply or discharged to the SRP water transmission system in the Arizona Canal. MRTF began operation in 1997 to treat groundwater from PCX-1 and the facility is owned and operated by AAWC.

2.2.1 2007 Overview

The MRTF was operational and functional throughout all but 24 days in 2007 and operated to meet AAWC water demands. Groundwater extraction tied into the MRTF contributed to capture and containment of the LAU zone of contamination (as discussed in Section 4.2.5) and treatment provided water for beneficial use to meet groundwater treatment performance standards (as discussed in Section 4.3.2 and except as discussed in Section 2.2.2).

AAWC reported 1.265 billion gallons of groundwater (3,381 AF) were pumped and treated at the MRTF in 2007 including 983 million gallons of groundwater extracted at PCX-1 and 281 million gallons at AAWC-15. Groundwater production from AAWC-15 was limited in 2007 by well maintenance activities. Extraction well AAWC-15 was inoperable in portions of March, April, and May and all of June through December due to pump failure and ensuing discovery of significant well casing corrosion that required major well rehabilitation. The extended down time was required to install a new casing sleeve in the well to maintain well integrity. Based on production totals and reported TCE concentrations, an estimated 545 pounds of TCE were removed from groundwater at the MRTF throughout 2007.

Compliance monitoring is conducted pursuant to an EPA-approved MRTF Operations and Maintenance (O&M) Plan to verify removal of VOCs from the extracted groundwater and assure treatment standards are achieved. The MRTF O&M Plan was approved by EPA on June 8, 2006.

According to procedures developed in the MRTF O&M Plan, samples of treated groundwater were collected on a weekly basis by the MRTF Operator from the air stripping tower utilized for PCX-1 (A/S effluent). The treated groundwater samples were submitted to Transwest Geochem for analysis of NIBW COCs. Additionally, extraction well samples were collected the first week of each month by SRP at PCX-1, AAWC-15, and AAWC-14, when the wells were operating, and analyzed by SRP.

A tabulation of VOC concentrations for NIBW COCs measured in MRTF extraction wells in 2007 is included in **Table 5**. Historical groundwater production and TCE concentrations at MRTF extraction wells are graphed in **Appendix G**. Results of analysis of treated MRTF groundwater conducted by Transwest Geochem are summarized in **Table 9**. The treated groundwater samples in the A/S effluent are used to evaluate compliance with groundwater treatment performance standards. All treated groundwater samples from the A/S tower treating well PCX-1 analyzed in 2007 were below the Method Reporting Limit (MRL) of 0.5 µg/L for TCE and below MRLs for all other NIBW COCs, except for a sample collected on October 15, 2007 (further discussion of this data point follows in the next section).

The MRTF discharges treated water to the AAWC distribution system and to the SRP Arizona Canal. Discharges to the Arizona Canal are further regulated by an Arizona Pollutant Discharge Elimination System (AzPDES) permit. Samples were collected monthly at the Arizona Canal outfall, when any discharge occurred, for testing required under the AzPDES permit. The results of the sample analyses are summarized in monthly Discharge Monitoring Reports (DMRs) that are submitted directly to the EPA and ADEQ. All outfall samples analyzed and reported in 2007 DMRs were below the MRL of 0.5 µg/L for TCE. Chloroform was detected in some MRTF effluent water samples which is explained by the fact that AAWC occasionally adds a hypochlorite solution to the treated water to disinfect the water supply for municipal use.

2.2.2 Operational Summary for October through December 2007

Laboratory analysis conducted by Transwest Geochem on a routine sample of treated water collected on October 15 from Tower #2 was reported to have a TCE concentration of 14 ug/L. Tower #2 was used to treat water from extraction well PCX-1 between October 9th to October 17th while Tower #3 was undergoing inspections and maintenance. The information concerning the October 15th lab data was reported to the NIBW PCs on November 7, 2007. EPA and ADEQ were informed of the discharge of incompletely treated water in Tower #2 effluent verbally on November 9, 2007 following validation of the laboratory data. A written water quality response notification was subsequently provided on November 14, 2007. Specific information regarding the October 15 water quality incident is included in the November 14th water quality response notification and subsequent response to EPA comments regarding this event submitted on January 4, 2008. The causes of this incident are currently under investigation and an investigation report will be submitted separately.

A tabulation of the results of TCE analyses obtained by the NIBW PCs for MRTF extraction wells and treated groundwater during fourth quarter is as follows:

Miller Road Treatment Facility

TCE Concentrations in µg/L

Week of:	PCX-1	AAWC-15	AAWC-14	A/S Effluent
September 30 – October 6	**63**	N.I.S.	**<0.5**	**<0.5**
October 7 – 13	NS	N.I.S.	NS	**<0.5**
October 14 – 20	NS	N.I.S.	NS	**14**
October 21 – 27	NS	N.I.S.	NS	**<0.5**
October 28 – November 3	NS	N.I.S.	NS	**<0.5**
November 4 – 10	**68**	N.I.S.	**0.9**	**<0.5**
November 11 – 17	NS	N.I.S.	NS	**<0.5**
November 18 – 24	NS	N.I.S.	NS	**<0.5**
November 25 – December 1	N.I.S.	N.I.S.	NS	N.I.S.
December 2 – 8	N.I.S.	N.I.S.	**<0.5**	N.I.S.
December 9 – 15	**71**	N.I.S.	NS	**<0.5**
December 16 – 22	NS	N.I.S.	NS	**<0.5**
December 23 – 29	NS	N.I.S.	NS	**<0.5**

Notes: NS = Not Sampled N.I.S. = Not In Service

As evidenced in the data summary, all treated water samples from MRTF except for the sample from tower #2 on October 15th were below the MRL of 0.5 µg/L for TCE. Additional water quality data collected at the MRTF is included in **Table 9**.

The MRTF was taken out of service on November 20, 2007 while the water quality incident was reviewed and evaluated. On December 15, 2007 treatment of water from PCX-1 was resumed under a start-up testing procedure approved by EPA. The MRTF was expected to resume routine operation and maintenance in the first quarter of 2008 following EPA approval of full operational status of the plant.

2.3 GROUNDWATER REMEDIATION AT AREA 7

Area 7 is a former Siemens Corporation manufacturing site located at the southeast corner of 75th Street and 2nd Street in Scottsdale, Arizona as shown on **Figure 18**. Siemens installed the Area 7 GWETS to enhance the NIBW groundwater remedy by extracting and treating groundwater containing relatively higher VOC concentrations at the source area, rather than allowing VOC mass to migrate to the CGTF extraction wells for removal and treatment. Groundwater extraction is performed using three MAU groundwater extraction wells designated as 7EX-3aMA, 7EX-4MA, and 7EX-5MA and one UAU groundwater extraction well designated as 7EX-1UA. The extracted groundwater is treated by ultraviolet oxidation (UV/OX) followed by air stripping. Treated water is discharged to the UAU using two remote groundwater reinjection wells (7IN-1UA and 7IN-2UA). The Area 7 MAU source control GWETS was implemented beginning in 1999 and became fully functional when 7EX-5MA was brought on-line in early 2002.

2.3.1 2007 Overview

During 2007, groundwater extraction tied into the Area 7 GWETS was effective in localized MAU source control (as discussed in Section 4.2.3) and groundwater treatment provided water for beneficial use that was safely below drinking water standards for all NIBW COCs (as discussed in Section 4.3.3).

A total of 208 million gallons of groundwater (637 AF) were pumped and treated at the Area 7 GWETS in 2007. Of the total, 18 million gallons were extracted from 7EX-1UA, 74 million gallons from 7EX-3aMA, 13 million gallons from 7EX-4MA, and 103 million gallons from 7EX-5MA. Performance data provided by the Area 7 GWETS operator indicates approximately 1,207 pounds of VOCs were removed from groundwater throughout 2007, with TCE accounting for approximately 99 percent of the mass.

Compliance monitoring is conducted pursuant to an EPA-approved Area 7 GWETS O&M Plan to verify removal of VOCs from the extracted groundwater and assure groundwater treatment standards are achieved. The Area 7 GWETS O&M Plan was approved by EPA on June 8, 2006.

In 2007, process samples including treated groundwater discharged from the Area 7 GWETS were collected monthly by the Area 7 GWETS Operator and submitted to Transwest Geochem for analysis of NIBW COCs. Samples from the Area 7 extraction wells were collected the first week of the quarter by SRP and analyzed by SRP. A tabulation of VOC concentrations for NIBW COCs measured in Area 7 extraction wells in 2007 is included in **Table 5**. Historical groundwater production and TCE concentrations at Area 7 extraction wells are graphed in **Appendix G**. Results of analysis of Area 7 process and treated groundwater conducted by Transwest Geochem are summarized in **Table 9**. All treated groundwater samples analyzed in 2007 from the Area 7 GWETS were below the MRL of 0.5 µg/L for TCE and all other NIBW COCs.

2.3.2 Operational Summary for October through December 2007

For the period of October to December 2007, the Area 7 GWETS operated as designed to remove VOCs in extracted groundwater to meet Arizona Aquifer Water Quality Standards for reinjection. The GWETS operated approximately 97 percent of the time during the fourth quarter of 2007. The system was periodically shut down for routine maintenance. Additionally, the submersible pumps in 7EX-4MA and 7EX-5MA were shut down from December 21, 2007 through January 4, 2008, while repairs to a faulty terminal block in the 7EX-4MA variable frequency drive were completed.

During the fourth quarter, process water samples were collected the first week of the month and include samples obtained from the combined influent to the GWETS at sample port SP-102, effluent from the UV/OX reactor at sample port SP-103, and effluent from the air stripper at sample port SP-105. Samples from the Area 7 extraction wells were collected the first week of the quarter by SRP at 7EX-1UA, 7EX-3aMA, 7EX-4MA, and 7EX-5MA and analyzed by SRP. The results of TCE analyses for extraction wells and treatment process water samples obtained during the fourth quarter are as follow:

Area 7 Groundwater Extraction System
TCE Concentrations in µg/L

Date	7EX-1UA	7EX-3aMA	7EX-4MA	7EX-5MA
10/1/2007	**6**	**580**	**1,400**	**540**

Area 7 Groundwater Treatment System
TCE Concentrations in µg/L

Date	GWETS Influent	UV/OX Effluent	A/S Effluent
10/1/2007	**680**	**180**	**<0.5**
11/8/2007	**590**	**130**	**<0.5**
12/5/2007	**590**	**100**	**<0.5**

In addition to testing for NIBW COCs, sampling for inorganic water quality is periodically conducted at the Area 7 GWETS. Inorganic water quality is monitored in treated groundwater and four UAU monitor wells in the vicinity of Area 7 to assure that there is no degradation of Aquifer Water Quality Standards (AWQS) caused by the reinjection of treated groundwater. Results of 2007 inorganic water quality analyses are provided in a report entitled, "Supplemental Data Collection, October 2007, NIBW Superfund Site" that will be submitted by the NIBW PCs concurrent with the 2007 Site Monitoring Report. The data indicate treated groundwater from the Area 7 GWETS has similar or slightly lower concentrations of inorganic water quality constituents than that in UAU monitor wells in the vicinity of Area 7. As a case in point, treated groundwater from Area 7 had a nitrate concentration of 11.5 milligrams per liter (mg/L) as nitrogen, total dissolved solids (TDS) concentration of 920 mg/L, and an arsenic concentration of 6 µg/L. In comparison, UAU groundwater monitor wells in the vicinity of Area 7 had nitrate concentrations up to 15.5 mg/L, TDS of up to 1,500 mg/L, and arsenic levels as high as 18 µg/L. The inorganic data indicate UAU and MAU groundwater at Area 7 are generally poor quality; however, the data verify that reinjection of treated groundwater from the Area 7 GWETS is not contributing to degradation of inorganic water quality in the UAU.

Routine operation, maintenance, and monitoring are expected to continue at the Area 7 GWETS throughout the first quarter 2008.

2.4 GROUNDWATER REMEDIATION AT AREA 12

The Area 12 GWETS is located at the former Motorola facility at 8201 East McDowell Road in Scottsdale, Arizona as shown on **Figure 18**. Motorola installed the Area 12 GWETS to enhance the NIBW groundwater remedy by extracting and treating groundwater containing relatively higher VOC concentrations at the source area, rather than allow VOC mass to migrate to CGTF extraction wells for removal and treatment. Groundwater extraction is performed using two MAU groundwater extraction wells designated as MEX-1MA and SRP well 23.6E-6.0N, also known as the Granite Reef well. The extracted groundwater is treated by air stripping and discharged to SRP for irrigation use. The Area 12 MAU source control GWETS was implemented beginning in early 1999 with start-up of MEX-1MA. The Area 12 GWETS was fully functional when the Granite Reef well came on-line in late 1999.

2.4.1 2007 Overview

During 2007, groundwater extraction tied into the Area 12 GWETS was effective in localized MAU source control (as discussed in Section 4.2.4) and groundwater treatment provided water for beneficial use that was safely below the water quality standards for all NIBW COCs (as discussed in Section 4.3.4).

A total of 377 million gallons of groundwater (1,173 AF) were pumped and treated at the Area 12 GWETS in 2007. Of the total, 333 million gallons were extracted from MEX-1MA and 49 million gallons from the Granite Reef well. Performance data provided by the Area 12 GWETS operator indicates a total of 259 pounds of VOCs were removed from groundwater throughout 2007, with TCE amounting to nearly 90 percent of the total.

Compliance monitoring is conducted pursuant to an EPA-approved Area 12 GWETS O&M Plan to verify removal of VOCs from the extracted groundwater and assure groundwater treatment standards are achieved. The Area 12 GWETS O&M Plan was approved by EPA on June 8, 2006.

In 2007, process samples including influent and treated groundwater were collected monthly by the Area 12 GWETS Operator and submitted to Transwest Geochem for analysis of NIBW COCs. Samples from the Area 12 extraction wells were collected the first week of the quarter by SRP and analyzed by SRP. A tabulation of VOC concentrations for NIBW COCs measured in Area 12 extraction wells in 2007 is included in **Table 5**. Historical groundwater production and TCE concentrations at Area 12 extraction wells are graphed in **Appendix G**. Results of analysis of Area 12 process and treated groundwater conducted by Transwest Geochem are summarized in **Table 9**. Although the Area 12 GWETS presently provides treated water for irrigation use, the treatment system is consistently operated to ensure that TCE in the extracted groundwater was below the drinking water MCL.

Treated groundwater from the Area 12 GWETS is discharged to an SRP irrigation lateral under a NPDES permit. Sampling and testing for limited inorganic water quality is conducted in accordance with the NPDES permit and the results are sent in monthly DMRs to the EPA and ADEQ.

2.4.2 Operational Summary for October through December 2007

The NIBW Area 12 GWETS operated as designed in the fourth quarter 2007. Groundwater was extracted from the MEX-1MAU well during October, November and December. Groundwater was extracted from the Granite Reef well during the first four days of October to allow for sampling. The treatment system operated with

100 percent availability for the months of October and November. In December, the GWETS operation was limited to December 4th and December 17th to 23rd due to storm events. The system was shutdown on December 23rd due to a General Dynamics shutdown, which included a power outage to install an additional transformer in the power grid that supplies the Area 12 Treatment System.

During the fourth quarter, process water samples were collected by the Area 12 GWETS Operator in the first week of the month and include samples of the combined influent to the GWETS at sample port WSP-1 and effluent from the air stripper at sample port WSP-2. Samples from the Area 12 extraction wells were collected by SRP at the beginning of the quarter when the wells were operational. The results of TCE analyses for extraction wells and treatment process water samples obtained for the fourth quarter are as follows:

Area 12 Groundwater Extraction and Treatment
TCE Concentrations in μg/L

Date	MEX-1MA	Granite Reef	GWETS Influent	GWETS Effluent
10/1/2007	NS	**100**	**110**	<**0.5**
10/25/2007	**46**	NS	NS	NS
11/5/2007	**66**	NS	**61**	0.7
12/18/2007	**65**	**110**	**64**	**0.8**

Notes: NS = Not Sampled

The Area 12 GWETS was taken out of service of December 23, 2007 for annual maintenance. The GWETS will remain off-line until approximately mid-February during the SRP north side canal dry-up period. Routine operation, maintenance, and monitoring are expected to continue at the Area 12 GWETS throughout the remainder of first quarter 2008.

3.0 SOIL REMEDIATION PROGRAM

Soil remediation has been conducted at NIBW Areas 6, 7, 8, and 12. Remediation using soil vapor extraction and treatment (SVET) has been completed at Area 6, 8, and 12. At Area 7, SVET has resulted in removal of approximately 7,000 pounds of VOCs. The Area 7 SVET system was shut down in May 2000 to allow VOC concentrations in the soil to equilibrate and to begin long-term monitoring for potential rebound. After an 18-month rebound period, soil vapor monitoring was conducted to determine the level of residual soil VOC concentrations and calculate the threat to groundwater. The results of long-term vapor monitoring and calculation of groundwater threat were provided in a report dated May 21, 2002. Although the report indicated SVET had achieved performance standards for Area 7 soils, EPA and ADEQ believed the soil VOC levels had not reached asymptotic levels. Consequently, it was decided to monitor the 125-foot interval of SVM 7-209 on a semi-annual schedule to determine when TCE concentrations become asymptotic. Soil vapor monitoring of this zone continued for five more years until April 2006.

In April 2006, the NIBW PCs collected soil vapor samples at Area 7 to determine the level of residual soil VOC concentrations and calculate the threat to groundwater. The results of soil vapor monitoring were included in a report submitted to EPA in June 2006 and concluded that the residual TCE in Area 7 soils did not pose a significant threat to groundwater. EPA and ADEQ did not approve the NIBW PCs request for soil remedy completion and asked for further optimization of the Area 7 soil remedy in a letter dated March 20, 2007. The NIBW PCs submitted a work plan on May 31, 2007 for in-situ chemical oxidation using potassium permanganate to optimize the Area 7 soil remedial action. EPA and ADEQ provided comments on the work plan on August 17th and asked for a revised work plan on or before September 31st. The NIBW PCs contacted EPA by phone on August 24th to respond to EPA and ADEQ comments on the planned optimization program. Based on these comments, the NIBW PCs opted not to proceed with chemical oxidation and informed EPA that a focused SVE program would be conducted to reach final closure. A work plan to restart and operate the Area 7 SVE system was issued to EPA on November 8, 2007.

4.0 EVALUATION OF NIBW REMEDIAL ACTION PERFORMANCE

Evaluation of the NIBW remedy is based on Performance Standards set forth in the SOW. Performance Standards are defined in the SOW for groundwater monitoring, groundwater containment, and groundwater treatment. In the following sections, monitoring data obtained during 2007 will be evaluated to assess achievement of performance criteria.

4.1 ASSESSMENT OF GROUNDWATER MONITORING PERFORMANCE STANDARDS

The scope and frequency of all components of the monitoring program were comprehensively evaluated as part of the GMEP development process. Monitoring program modifications established in the GMEP became effective in January 2003 and included: 1) reduction in the number of lower MAU wells included in the water level monitoring program; 2) reduction in the frequency of water level monitoring from quarterly to semi-annual; 3) reduction in the number of wells included in the routine water quality monitoring program; 4) reduction in the frequency of routine water quality monitoring from semi-annual to annual; 5) increase in the scope of the indicator well monitoring programs for the northern LAU, Area 7, and Area 12; and 6) implementation of quarterly water quality monitoring for all indicator wells.

Based on a review of monitoring data obtained through 2007, the NIBW PCs conclude that the monitoring network and monitoring frequency are sufficient to achieve all objectives of the monitoring program, providing data critical to the on-going evaluation of remedy performance.

4.2 ASSESSMENT OF GROUNDWATER CONTAINMENT PERFORMANCE STANDARDS

Performance of the NIBW remedy is evaluated based on a rigorous approach established in the GMEP. In the GMEP, monitoring program objectives are matched with specific performance criteria, a methodology for measuring achievement of performance criteria, a definition of when contingency evaluations or actions would be initiated, and alternative contingency response actions that may be taken. Based on review of 2007 monitoring data, five specific aspects of the remedy will be evaluated with respect to groundwater containment performance standards, in accordance with achievement measures established in the GMEP. Aspects of the remedy that will be evaluated include the: UAU zones of contamination, MAU/LAU zone of contamination, Area 7 MAU source area, Area 12 MAU source area, and northern LAU hydraulic capture.

4.2.1 Evaluation of UAU Mass Flux

The assessment of remedy performance for the UAU zones of contamination involves monitoring of VOC mass reduction over time. For the 2007 VOC mass flux analysis, total mass of VOCs present in UAU groundwater was computed using data for saturated thickness from the October 2007 water level monitoring round and VOC concentration data from the October 2007 water quality monitoring round. **Table 10** summarizes VOC mass estimates for the UAU zones of contamination for 2007. A total of about 39 gallons, or 469 pounds, of VOCs are estimated to remain in the saturated portion of the UAU. **Figure 19** illustrates the decline in total VOC mass in UAU groundwater over time. Estimated total mass of VOCs present in the saturated portion of the UAU has decreased fairly systematically with time, declining from a high of over 11,000 pounds in 1993 to a low of 289 pounds in 2005. As shown on **Figure 19**, VOC mass calculations over the past six years have been relatively uniform in the range of 500 pounds indicating the rate of decline is becoming asymptotic. Although estimated VOC mass has generally leveled off over recent years, the 5-year running average (as shown on **Figure 19)** represents a declining trend. Based on review of these data and analyses, the NIBW PCs conclude that the UAU mass flux achievement measure, which requires a decrease in UAU VOC mass using a 5-year running average, has been satisfied.

4.2.2 Evaluation of MAU/LAU Hydraulic Containment

The assessment of remedy performance for the MAU/LAU zone of contamination involves demonstrating that: 1) direction of groundwater movement along the periphery of the zone of contamination is toward extraction wells or the southwest margin; 2) location of the 5 μg/L contour for the zone of contamination does not shift outward more than 1,000 feet relative to plume interpretations for the baseline time period, October 2001; and 3) TCE concentrations at a specified set of MAU and LAU monitor wells are below specified levels. For 2007, compliance with all of these achievement measures was attained, as described below.

Figures 20 and 21 illustrate containment of the MAU and LAU zones of contamination, respectively, demonstrating that direction of groundwater movement for the periphery of all areas where concentrations of TCE are in excess of 5 µg/L is either toward extractions wells tied into treatment or toward the southwest margin. In each case, water level and TCE concentration data for October 2007 are shown, with arrows indicating direction of groundwater movement. For the MAU **(Figure 20)**, direction of groundwater movement along the periphery of the zone of contamination is toward the CGTF or Area 7 extraction wells in the north part of the site, and toward the Area 12 extraction wells or the southwest margin in the south part of the site. For the LAU **(Figure 21)**, direction of groundwater movement along the periphery of the zone of contamination is toward the either the CGTF or MRTF extraction wells.

Figures 15 and 16 illustrate locations of 5 µg/L contours for the October 2001 and October 2007 zones of contamination in MAU and LAU groundwater, respectively. The illustrations demonstrate that there has generally been very little change in the location of the 5 µg/L contour over the 5-year time period; outward shifts in the location of the 5 µg/L contour were all substantially less than the 1,000-foot performance measure. Small inward and outward shifts in the location of the 5 µg/L contour that are interpreted between the two data sets are attributable to small changes in reported TCE concentrations. An area of apparent change located near Scottsdale Road between Thomas and McDowell Roads is attributable to the availability of new data at well M-17MA/LA beginning in 2002.

Compliance with the final achievement measure for the zone of MAU/LAU contamination, which relates to not exceeding specified TCE concentrations at selected MAU and LAU monitor wells, is summarized below.

Required and Observed TCE Concentrations in Selected NIBW Monitor Wells

	TCE Concentration (µg/L)	
Well Name	**Achievement Measure**	**October 2007 Results**
M-2MA	10	4.5
M-7MA	10	1.4
S-1MA	2	<0.5
S-2MA	3	<0.5
M-5LA	10	3.0
PA-2LA	3	<0.5
PA-15LA	10	0.5
PA-18LA	10	1.4
PG-1LA	15	2.5
PG-44LA	5	1.6
S-1LA	3	<0.5
S-2LA	15	3.8

4.2.3 Evaluation of Area 7 MAU Source Area Program

The assessment of remedy performance for the Area 7 MAU source area program involves demonstrating: 1) hydraulic capture such that direction of groundwater movement from the vicinity of monitor well PA-12MA is toward the cone of depression associated with Area 7 pumping, and 2) a decline in 5-year running average TCE concentrations for monitor wells located within the hydraulic capture zone associated with Area 7 pumping. The 5-year running average is calculated following full implementation of the Area 7 groundwater remedy at monitor wells located within the Area 7 hydraulic capture zone, including: D-2MA, E-10MA, PA-10MA,PA-12MA, W-1MA, and W-2MA. The groundwater remedy at Area 7 was fully operational in 2003 following start-up of extraction well 7EX-5MA in 2002.

The remedy for the Area 7 MAU source area has achieved hydraulic capture such that direction of groundwater movement from the vicinity of monitor well PA-12MA is toward the cone of depression associated with Area 7 pumping. **Figure 22** includes graphs summarizing 10 years of water level and TCE concentration data for indicator wells in the vicinity of Area 7. These data are helpful for evaluating long-term trends and verifying overall effectiveness of the Area 7 groundwater extraction and treatment system. Review of hydrographs indicates impacts on water levels and TCE concentrations from start-up of the Area 7 remedy in 1999 when extraction was initiated at 7EX-3MA and 7EX-4MA. Water levels generally stabilized at MAU monitor wells following full implementation of the Area 7 groundwater remedy in 2002 when extraction was added at 7EX-5MA. In recent years, water levels have risen in most MAU wells consistent with regional trends. TCE concentrations in the MAU in the vicinity of Area 7 generally stabilized and began to decline once all three Area 7 extraction wells were operational. Concentration changes observed at some monitor wells are generally attributed to changes in local and regional pumping patterns, as described below.

Figure 22 also shows MAU TCE concentration contours for October 2007 and the estimated extent of hydraulic capture associated with MAU extraction in the vicinity of Area 7. MAU water level contours and the associated interpretation of hydraulic containment for the entire site for October 2007 are shown on **Figure 20**. Review of patterns of groundwater movement and the extent of hydraulic capture for the vicinity of Area 7 indicates that a cone of depression, centered approximately on Thomas Road, occurs as a result of MAU pumping at Area 7 and CGTF extraction wells. Consistent with the achievement measure, direction of groundwater movement from the vicinity of monitor well PA-12MA is to the northwest toward this cone of depression. Accordingly, the NIBW PCs conclude that compliance with the hydraulic capture component of the Area 7 remedy performance was achieved in 2007.

The second evaluation tool for the Area 7 MAU source area is a decline in the 5-year running average of TCE concentrations for the relevant monitoring wells following full implementation of the Area 7 groundwater remedy. **Table 11** summarizes annual average TCE concentrations for the period 1995 through 2007 for the following MAU monitor wells located within the capture zone associated with MAU extraction at Area 7: D-2MA, E-10MA, PA-10MA, PA-12MA, W-1MA, and W-2MA. Annual average TCE concentrations for each of the specified Area 7 MAU monitor wells were computed for the period 1995 through 2007. Next, the annual monitor well average TCE concentrations were averaged to arrive at a combined Area 7 average for each year. Using the annual average TCE values computed in this manner, the 5-year average was calculated to be 1,161 µg/L for the period 2003 through 2007. This value represents the first computed 5-year running average for the Area 7 mass calculation since the system has been fully operational. **Figure 23** depicts the trend in computed 5-year running average TCE concentrations in the Area 7 indicator wells over the period 1995-2007.

4.2.4 Evaluation of Area 12 MAU Source Area Program

The assessment of remedy performance for the Area 12 MAU source area program involves demonstrating: 1) hydraulic capture such that the direction of groundwater movement from the vicinity of Hayden Road is toward the cone of depression associated with Area 12 pumping, and 2) a decline in 5-year running average TCE concentrations for monitor wells located within the hydraulic capture zone associated with Area 12 pumping. The 5-year running average is to be calculated following full implementation of the Area 12 groundwater remedy at monitor wells located within the Area 12 hydraulic capture zone, including: E-1MA, M-4MA, M-5MA, M-6MA, M-7MA, M-9MA, M-15MA, and PA-21MA. The groundwater remedy at Area 12 was fully operational in 2000, once both extraction wells were brought on-line in 1999, and 2004 was the first year when 5 years of data are available to conduct the running average performance assessment.

Figure 24 includes graphs summarizing 10 years of water level and TCE concentration data for indicator wells in the vicinity of Area 12. These data are helpful for evaluating long-term trends and verifying overall effectiveness of the Area 12 groundwater extraction and treatment system. Review of hydrographs indicates substantial impacts on water levels and TCE concentrations from implementation of the Area 12 remedy in 1999. For 2007, water levels in the vicinity of Area 12 display seasonal patterns in response to pumping but are otherwise fairly stable with respect to long-term trends. TCE concentrations during 2007 also exhibit variability at most Area 12 monitor wells, attributed to local groundwater pumping influences. Increasing TCE concentrations previously observed at downgradient monitor well E 5MA now appear to be declining.

Figure 24 also shows MAU TCE concentration contours for October 2007 and the estimated extent of hydraulic capture associated with Area 12 MAU extraction. MAU water level contours and the associated interpretation of hydraulic containment for the entire site for October 2007 are shown on **Figure 20**. Review of patterns of groundwater movement and the extent of hydraulic capture for the vicinity of Area 12 indicates that a cone of depression, centered approximately on the western edge of Area 12, occurs as a result of MAU pumping at Area 12 extraction wells. Consistent with the achievement measure, direction of groundwater movement from the vicinity of Hayden Road is to the east toward extraction well MEX-1MA. The NIBW PCs conclude that compliance with the hydraulic capture component of the Area 12 remedy performance was achieved in 2007.

Table 12 summarizes annual average TCE concentrations for the period 1994 through 2007 for the following MAU monitor wells located within the capture zone associated with MAU extraction at Area 12: E-1MA, M-4MA, M-5MA, M-6MA, M-7MA, M-9MA, M-15MA, and PA-21MA. Annual average TCE concentrations for each of the specified Area 12 MAU monitor wells were computed for the period 1994 through 2007. Next, the annual monitor well average TCE concentrations were averaged to arrive at a combined Area 12 average for each year. Using the annual average TCE values computed in this manner, the 5-year average was calculated to be 22 µg/L for the period 2003 through 2007. This value is less than the 5-year average computed for the previous period (2002 to 2006). Based on review of these data and analyses, the NIBW PCs conclude that the Area 12 mass removal achievement measure, which requires demonstration of a non-increasing trend in TCE concentrations using a 5-year running average, has been satisfied.

Calculation of previous 5-year running averages of TCE concentrations in Area 12 monitor wells over the period 1995 through 2007 is given in **Table 12** and shown graphically in **Figure 25**. The data demonstrate there have been widespread and substantial declines of TCE concentrations in monitor wells within the Area 12 zone of hydraulic containment corresponding to implementation of the Area 12 groundwater remedy. It is evident from this data set that on-going groundwater extraction since 1999 has removed a substantial amount of TCE mass that was present in MAU groundwater in the vicinity of Area 12, and that the 5-year running average concentrations are becoming asymptotic with respect to time because the remaining mass is relatively small.

4.2.5 Evaluation of Northern LAU Hydraulic Capture

The assessment of remedy performance for the northern LAU program involves demonstrating: 1) the consistent presence of a cone of depression in the vicinity of the northern LAU extraction wells that are tied into treatment (MRTF extraction wells); and 2) TCE concentrations at monitor wells PG-42LA and PG-43LA, and at extraction well AAWC-14 that are less than or equal to 2 µg/L. For 2007, the NIBW PCs conclude that compliance with these two achievement measures was attained in the northern LAU, as described below.

Figure 26 includes graphs summarizing 10 years of water level and TCE concentration data for indicator wells in the northern LAU. These data are helpful for evaluating long-term trends and verifying overall effectiveness of the northern LAU containment program. Review of hydrographs indicates substantial impacts on water levels and some flattening of increasing TCE concentration trends from implementation of the northern LAU remedy in 1997. For 2007, water levels have increased relative to previous years. TCE concentrations remained below the detection limit at monitor wells PG-42LA and PG-43LA, and in all but one of the routine monthly samples collected at extraction well AAWC-14. Stable to decreasing TCE concentrations were observed in 2007 at well PA-6LA, PA-13LA, and S-2LA. Increasing TCE concentrations observed at well PG-2LA and PG-40LA, located downgradient along the centerline of the LAU plume, indicate capture of the northern LAU plume is occurring south of the AAWC well field.

Figure 26 also shows LAU TCE concentration contours for October 2007 and the estimated extent of hydraulic capture as predicted by the groundwater flow model developed as part of the Feasibility Study Addendum (FSA). LAU water level contours for the entire site for October 2007 are shown on **Figure 21**. Review of patterns of groundwater movement for the northern LAU indicates that a cone of depression, generally centered on the AAW well field and extraction well PCX-1, occurs as a result of focused LAU pumping at the MRTF extraction wells. Consistent with the specified achievement measure, this cone of depression moves water from the LAU zone of contamination toward extraction wells tied into treatment.

Although a cone of depression in LAU groundwater occurred previously in the vicinity of the AAWC wellfield, the location of the lowest point in this cone has shifted to the south over time in response to planned changes in the distribution of pumping between the various wells. **Figure 27** is a stacked bar chart showing total annual pumping volume for AAWC wells and PCX-1 for the time period 1996 through 2007. Wells are stacked in order of their position from south to north in the wellfield, such that annual pumpage for well PCX-1 is on the bottom and annual pumpage for well AAWC-17 is on the top of each bar. Pumping volumes contributed by MRTF extraction wells are shown in shades of red, whereas pumping volumes for wells to the north, where treatment is not available, are shown in shades of blue. It is evident from this graph that the rehabilitation work on extraction well AAWC-15 resulted in substantially lower production from this well in 2007 compared to previous years.

Review of **Figure 27** demonstrates that during the period prior to and during initial implementation of the MRTF extraction and treatment program (1996 and 1997), production in response to AAWC demand was weighted toward the northern extraction wells (AAWC-16 and AAWC-17). However, changes in the pumping strategy occurred following initiation of the MRTF extraction and treatment program. Beginning in 1998, pumping was focused more heavily on the southern extraction wells (PCX-1, AAWC-15, and AAWC-14) that are tied into treatment at the MRTF. During 2007, MRTF extraction wells PCX-1, AAWC-15, and AAWC-14 contributed around 57 percent of the total volume of groundwater pumped in the wellfield. Management of groundwater pumping in this manner ensures effective capture and treatment of the northern LAU zone of contamination.

4.2.6 Evaluation of Need for Modeling Analyses

The remedy for the NIBW Site established in the Amended ROD includes periodic use of modeling analyses to "assess the accuracy over time of projections in the FSA". In the GMEP, the PCs presented, and EPA and ADEQ approved, a detailed approach to determining when modeling analyses would be conducted, what the scope of modeling analyses would comprise, and how results of modeling analyses would be used. Based on the approach described in the GMEP, modeling analyses would be conducted as part of the Five-Year Review process for the site. In addition, the need for modeling analyses would be considered under the following circumstances: 1) if large-scale changes in the magnitude or pattern of groundwater pumping are planned or have occurred subsequent to the most recent modeling effort, and 2) if contingency response actions are initiated due to a lack of compliance with specific achievement measures for any component of the remedy.

Over the past year there has been a decline in groundwater pumping in the vicinity of the NIBW Site, as shown in **Table 7**. Reduced groundwater pumpage of peripheral production wells and focusing of pumping at extraction wells tied into treatment is beneficial to hydraulic capture and containment of the NIBW zones of groundwater contamination and is not a condition that would necessitate modeling analyses.

The need for model updates and/or analyses will be evaluated in an on-going manner as data collection continues in 2008.

4.3 ASSESSMENT OF GROUNDWATER TREATMENT PERFORMANCE STANDARDS

Performance of the NIBW groundwater treatment systems is evaluated based on criteria established in the SOW and compliance with Groundwater Cleanup Standards specified in the Amended ROD. The following sections summarize monitoring data obtained during 2007 with respect to groundwater treatment performance standards at the four GWETS.

4.3.1 Evaluation of the Central Groundwater Treatment Facility

Section III.C of the SOW, requires that treated groundwater from the CGTF meet cleanup standards for NIBW COCs, as set forth in Table 3 of the Amended ROD. Cleanup standards defined in Table 3 are equivalent to MCLs adopted by EPA pursuant to the Safe Drinking Water Act (42 U.S.C. §§ 300f-300j-11), as shown in the following table.

Contaminants of Concern	MCL (µg/l)
Trichloroethene (TCE)	5.0
Tetrachloroethene (PCE)	5.0
1,1-Dichloroethene (DCE)	7.0
1,1,1-Trichloroethane (TCA)	200
Chloroform (TCM)	6.0*

* Chloroform produced as a byproduct of municipal water supply disinfection is exempt from the treatment standard for chloroform identified in Table 3 of the Amended ROD.

Throughout 2007, samples of treated groundwater have been collected in the common sump at the CGTF and analyzed for the NIBW COCs on at least a weekly basis. The results of sampling and analysis have been reported by the COS in their 2007 quarterly Compliance Monitoring Reports. As evidenced in the COS reports, all common sump samples were below the cleanup standards set forth in Table 3 of the Amended ROD. Compliance monitoring data indicate all common sump samples were at or below the 0.5 µg/L MRL for TCE and other NIBW COCs.

4.3.2 Evaluation of the Miller Road Treatment Facility

Section III.C of the SOW, requires that treated groundwater from the MRTF meet the cleanup standards set forth in Table 3 of the Amended ROD. Further, treated groundwater from the MRTF that is discharged to the SRP water supply system at the Arizona Canal is required to meet NPDES permit limits.

Throughout 2007, samples of treated groundwater were collected on a weekly schedule from air stripper effluent of PCX-1 and analyzed for NIBW COCs. The results of sampling and analysis have been discussed in previous 2007 quarterly reports and included in **Table 9** of this report. As indicated in all quarterly reports and **Table 9**, all treated groundwater samples tested in the first three quarters were below the cleanup standards set forth in Table 3 of the Amended ROD. For these periods, compliance monitoring data indicate all treated groundwater samples from the tower treating extraction well PCX-1 were below the 0.5 µg/L MRL for TCE and the MRLs for all other NIBW COCs during January through October.

As stated in Section 2.2.2 of this report, routine sampling and analysis of a Tower 2 effluent sample collected on October 15th was reported to have a TCE concentration of 14 ug/L. The sample of water collected on October 15th was obtained from Tower #2 effluent which was treating water extracted from well PCX-1 during an approximately nine day period. Tower #3, normally used to treat PCX-1, was undergoing inspection and maintenance at that time. Verbal and written water quality response notifications were provided to the EPA and ADEQ. Specific written information regarding the October 15 water quality incident is included in a November 14, 2007 water quality response notification and a subsequent response to EPA comments submitted on January 4, 2008. All other compliance monitoring samples of PCX-1 treated water collected the fourth quarter including samples collected the previous and following two weeks in October did not have detectable concentrations of TCE.

Treated groundwater discharged to the SRP water supply system at the Arizona Canal outfall was tested monthly for select volatile organic compounds and physical and inorganic water quality parameters as required by AzPDES permit. The results of sampling and analyses were given in monthly DMRs submitted to EPA and ADEQ and document the discharge was within allowable limits for the AzPDES permit throughout 2007.

4.3.3 Evaluation of the Area 7 Groundwater Treatment System

Section III.C of the SOW, requires that treated groundwater from the Area 7 GWETS meet cleanup standards set forth in Section XII.B.7.b of the Amended ROD. Specifically, in the case of Area 7, treated water used to recharge the aquifer must meet substantive requirements of the Underground Injection Control (UIC) Program.

Discharges of treated water to the aquifer via reinjection wells at Area 7 that are subject to the UIC Program are regulated in Arizona by ADEQ under the Aquifer Protection Permit (APP) Program. The APP Program requires that any discharges to the aquifer must not cause or contribute to a violation of AWQS. In Arizona, all groundwater is classified for drinking water protected use so AWQS are primary drinking water standards by rule. If an aquifer water quality standard is already exceeded at the point of compliance in groundwater then the discharge must not cause further degradation of the aquifer with respect to the parameter that exceeds the standard.

Throughout 2007, samples of treated groundwater have been collected from air stripper effluent at the Area 7 GWETS and analyzed for NIBW COCs on at least a monthly frequency while the system was in service. The results of sampling and analysis are included in **Table 9**. As evidenced from the data, all treated water samples from the Area 7 GWETS were below MCLs for NIBW COCs and therefore the discharge meets Arizona AWQS for these parameters.

Treated groundwater that is discharged to Area 7 reinjection wells recharges the UAU groundwater system. Inorganic water quality in the UAU is typically poorer than that of treated groundwater from the Area 7 GWETS, which is mostly derived from the MAU. As discussed in Section 2.3.2 of this report and evidenced by inorganic water quality data reported in the NIBW Supplemental Data Submittal for October 2007 (issued concurrently with this Site Monitoring Report), reinjection of treated water from the Area 7 GWETS is not causing or contributing to further degradation of inorganic water quality in UAU groundwater.

4.3.4 Evaluation of the Area 12 Groundwater Treatment System

Section III.C of the SOW, requires that treated groundwater from the Area 12 GWETS meet cleanup standards set forth in Section XII.B.7.b of the Amended ROD. Specifically, in the case of Area 12, treated water that is discharged to the SRP water supply system must meet substantive requirements of the governing NPDES permit.

Throughout 2007, samples of treated groundwater have been collected from air stripper effluent at the Area 12 GWETS and analyzed for NIBW COCs on at least a monthly frequency while the system was in service. The results of sampling and analysis are included in **Table 9**. As evidenced from the data, all treated water samples from the Area 12 GWETS were below MCLs for NIBW COCs and therefore meet the NPDES permit limits for discharge of VOCs to the SRP water supply system. Although groundwater at Area 12 is treated to achieve drinking water MCLs, it should be noted that the receiving water is currently used for irrigation water supply in the SRP Grand Canal. Additional sampling and analysis for physical and inorganic water quality parameters is reported in monthly DMRs submitted to EPA and ADEQ and confirm the discharge was within allowable limits for the NPDES permit throughout 2007.

4.4 PROGRESS TOWARD ACHIEVEMENT OF REMEDIAL ACTION OBJECTIVES

EPA established seven Remedial Action Objectives (RAOs) for the NIBW Site in the September 2001 Amended ROD. The following is a qualitative discussion of the progress achieved in satisfying RAOs, based on review of data through 2007.

<u>Remedial Action Objective #1:</u>

Restore the Upper, Middle, and Lower Aquifers to drinking water quality by decreasing the concentrations of the contaminants of concern to below the cleanup standards.

Significant progress has been made towards the removal of NIBW COCs and restoration of groundwater to drinking water quality with respect to these contaminants. In 2007, the NIBW remedial actions resulted in the extraction and treatment of over 3.6 billion gallons of groundwater and 2,800 pounds of TCE, as shown in **Table 8**. From the inception of the NIBW groundwater remedy in 1994, approximately 68 billion gallons of groundwater have been extracted to remove an estimated 62,000 pounds of TCE. Furthermore, soil remedial actions (as discussed in RAO #6) have largely removed on-going sources of TCE to groundwater at EPA-identified source areas. As a consequence, TCE concentrations have measurably decreased in the UAU and portions of the MAU and LAU.

UAU groundwater has shown the most significant decline in TCE concentrations. According to UAU mass flux calculations prepared by the NIBW PCs, the estimated VOC mass in the UAU has declined from more than 11,000 pounds in 1993 to approximately 469 pounds in 2007, representing a decrease of over 95 percent in 14 years **(Figure 19)**. TCE concentrations in the UAU have fallen off correspondingly. Presently, the highest TCE concentration in the UAU is 43 µg/L compared to historical concentrations in the thousands of micrograms per liter.

Local declines in TCE concentrations continue to be evident in MAU and LAU groundwater. With the exception of groundwater in the vicinity of Area 7, TCE concentrations in groundwater in the MAU are generally declining. For example, Area 12 historical data indicate a systematic reduction in TCE concentrations at most Area 12 indicator wells **(Figure 24)**. Historical LAU water quality data demonstrate a clear trend of declining TCE concentrations in the southern portion of the zone of contamination and generally stable levels in the northern portion of the plume **(Figure 26)**. Review of more recent LAU water quality data indicates that previously increasing TCE concentration trends in the northern LAU are stable and possibly beginning to decline, while decreasing trends in the southern LAU continue. Graphs showing TCE concentrations for the period of record for MAU and LAU monitor wells are provided in **Appendix D**.

Remedial Action Objective #2:

Protect human health and the environment by eliminating exposure to contaminated groundwater.

As discussed in Section 4.3, groundwater that is extracted as part of the NIBW Site remedy has generally been treated to meet the groundwater cleanup standards specified in the Amended ROD. The exception to this statement is attributed to a sample of Tower 2 effluent collected at MRTF on October 15, 2007. However, as reported in the water quality response notification to EPA and ADEQ, production data relating to operation of the AAW water supply system indicate the water entering the AAW public water system was below the primary drinking water standard for TCE.

Remedial Action Objective #3:

Provide the City of Scottsdale with a water source that meets MCLs for NIBW contaminants of concern.

The CGTF was constructed to provide treatment of TCE-impacted groundwater for COS beneficial use. Since the CGTF was conditionally certified in 1995, the CGTF has pumped and treated about 38 billion gallons of groundwater to meet MCLs for the NIBW COCs. The treated groundwater is used as a supply to the COS potable water system.

Remedial Action Objective #4:

Achieve containment of the groundwater contamination plume by preventing any further lateral migration of contaminants in groundwater.

As discussed in Section 4.2, the combined groundwater extraction tied to treatment at the CGTF, MRTF, Area 7, and Area 12 has achieved hydraulic containment throughout the zone of MAU/LAU groundwater contamination. The most current water level data continue to demonstrate that the direction of groundwater movement within the zone of MAU/LAU contamination is toward the NIBW extraction wells. The most current water quality data further show that the MAU/LAU zone of contamination is within the region of hydraulic capture of the NIBW extraction wells. TCE concentrations in monitor wells located near the edge or along the periphery of the zone of MAU/LAU contamination show decreasing TCE concentration trends in many parts of the site.

<u>Remedial Action Objective #5:</u>

> **Reuse of the water treated at the Site to the extent possible in accordance with Arizona's Groundwater Management Act.**

Treated water produced by all four NIBW groundwater remedial actions is beneficially reused. As previously mentioned, the CGTF provides treated groundwater as a supply to the COS potable water system. The MRTF treats groundwater for use in the AAWC and/or SRP potable water systems. At Area 7, treated groundwater is discharged to shallow injection wells to recharge the UAU aquifer. At Area 12, treated groundwater is provided to the SRP water supply system for irrigation uses. All NIBW end uses are consistent with beneficial use designations of the ADWR and in accordance with the Groundwater Management Act. Furthermore, the NIBW remedy has incorporated COS, SRP, and AAWC as end users of treated groundwater in lieu of groundwater pumping they have historically done and would have otherwise relied upon in this area.

Remedial Action Objective #6:

Mitigate any soil contamination that continues to impact groundwater.

As explained in Section 3.0, the NIBW PCs have implemented soil cleanup at four EPA-identified source areas, including Areas 6, 7, 8, and 12. The collective soil remediation has resulted in the removal of nearly 10,000 pounds of TCE in the unsaturated zone and virtually eliminated these sources as an ongoing threat for groundwater contamination. At the present time the soil remediation is complete at Areas 6, 8, and 12. Area 7 SVE will be restarted to attempt to remove the limited residual TCE that remains in recalcitrant soil horizons. The effectiveness of NIBW soil cleanup is demonstrated by the significant reduction of TCE concentrations and mass in UAU groundwater, as discussed above.

Remedial Action Objective #7:

Provide long-term management of contaminated groundwater to improve the regional aquifer's suitability for potable use.

The NIBW PCs have closely coordinated the planning and implementation of NIBW remedial actions with the key water providers, including the COS, SRP, and AAWC. The efforts have strongly focused on defining mutually beneficial objectives for all parties involved in the remedy. For example the NIBW PCs require consistent and reliable groundwater extraction in the areas most favorable for capture and containment of the MAU/LAU groundwater contamination. The water providers have considerable, but variable water demands in the NIBW area and a system of existing wells and infrastructure available for groundwater production.

Through technical discussions and cooperation, the parties have taken a number of steps to focus groundwater extraction and end uses for optimum water resource management. For example, the NIBW PCs have installed and modified a number of the water provider wells to improve groundwater contaminant capture and mass removal. To assure the water providers can take the treated groundwater, the NIBW PCs have upgraded treatment systems to assure acceptable water quality and enhanced infrastructure and control systems for the water providers. The water companies have cooperated by prioritizing pumping to meet water demands using those wells most benefiting the remedy.

The extraction and treatment system for the northern LAU is an example of the collaboration developed for improved groundwater management. The MRTF links wells, water supplies, water demands, and end uses of SRP and AAWC. Through cooperation with the water providers and the versatility provided by the MRTF, the wells tied into the MRTF are operated nearly constantly to achieve containment of the northern LAU plume. The water providers have further implemented a water exchange linked to groundwater extraction at PCX-1 (installed for optimum plume capture by the NIBW PCs) in exchange for Colorado River water that substitutes for other AAWC groundwater pumping. The overall effect is to reduce the net groundwater withdrawal in the area while optimizing pumping in the AAWC wellfield for LAU plume containment.

4.5 MANAGEMENT OF UNTREATED GROUNDWATER

Section VI.B.4.n of the SOW requires COS, SRP, and the NIBW PCs to provide a report describing the creation and maintenance of records to document compliance with Section VI.B.4.a through VI.B.4.m of the SOW. Section VI.B.4 specifies provisions for managing untreated groundwater extracted from NIBW wells as part of the remedy and requires that groundwater be managed as if it were a hazardous waste by following the requirements set forth in Sections VI.B.4.a through VI.B.4.m. The NIBW PCs, SRP, and COS are submitting the following information to fulfill the requirements for annual reporting of compliance with Section VI.B.4 of the SOW. For ease of reference, information regarding COS, SRP, and the NIBW PCs management practices pertaining to applicable requirements of Section VI.B.4 are referenced in the order listed in the SOW.

Section VI.B.4.a – normal operation, maintenance, and monitoring activities:

The NIBW PCs have specified procedures for management of untreated groundwater associated with sampling activities at the MRTF, Area 7 GWETS, and Area 12 GWETS and well equipment maintenance in O&M Plans that were approved by EPA and ADEQ on June 8, 2006. SRP has developed and followed procedures for managing untreated groundwater during monitor well sampling in the Phase I Sampling and Analysis Plan (SAP). In accordance with the Phase I SAP, untreated groundwater resulting from purging and sampling of NIBW monitor wells was treated to MCLs using granular activated carbon during 2007. During well and well equipment maintenance activities conducted at SRP NIBW extraction wells in 2007, well access was restricted. There were no accidental releases of untreated groundwater at the Granite Reef well, PCX-1, or COS-31 during pump and well maintenance in 2007.

The COS has specified procedures for management of untreated groundwater associated with sampling activities at the CGTF and well equipment maintenance in an EPA-approved O&M Plan. In 2007, the City handled all untreated groundwater for the CGTF and its related pipelines and well sites in accordance with the O&M Plans and this section of the SOW. The City also conducts monthly routine safety check sheet inspections of the facility and all equipment related to the facility such as the air fans, pumps, heaters, well sites, raw water transmission lines, air relief valves, SCADA alarms, dialers and pagers, and conducts maintenance on a scheduled routine basis and as needed.

Section VI.B.4.d – annual treatment facility inspections:

Each NIBW groundwater treatment facility is inspected on a routine basis, as part of the normal operation and maintenance procedures, for equipment malfunction and deterioration that could result in the release of untreated groundwater.

As explained in Section 2 and Appendix E of this report, the NIBW PCs and COS coordinated facility tours for EPA inspection of the Area 7 and Area 12 GWETS on November 13, 2007 and inspections of the MRTF and CGTF on December 13, 2007. The facilities were inspected for malfunctions, deterioration, operator practices or errors, and discharges that may be causing or could result in a release of untreated groundwater. At each site, the major system components were identified and examined for operability, condition of operating equipment, and management of untreated groundwater and residual materials. Additionally, operator practices related to system startup and shutdown, routine and non-routine maintenance, and sampling were reviewed with EPA. The results of the inspections indicated that the facilities appeared to be in a condition to operate in such a manner to meet treatment performance standards or compliance with the Amended CD/SOW. No hazardous waste is generated, handled, or stored at the NIBW groundwater treatment plants.

A summary report documenting the site inspection for each facility is provided in **Appendix E**.

Section VI.B.4.e – training for responding to releases of untreated groundwater:

The NIBW PCs submitted a plan for health and safety training of GWETS Operators and Emergency Coordinators to EPA as part of materials included in an

August 1, 2003, "Submittal of Information Required, Section VI of the Statement of Work" provided to EPA and ADEQ. The plan specified steps to be conducted for personnel at MRTF, Area 7, and Area 12 to assure that they will have appropriate health and safety training to respond to releases of untreated groundwater in a manner to protect public health and the environment. In 2007, AAWC provided health and safety training to all personnel through weekly safety briefings and company sponsored instruction.

In 2007, City personnel along with LFR provided emergency response and incident management training sessions for an untreated groundwater release for both CGTF and Area 7 raw water pipelines. The training session was conducted on November 27, 2007 and attended by COS operations and distribution personnel. Documentation of the training handouts and sign in sheet are kept on file at the CGTF and the COS Water Campus.

The Contingency and Emergency Response Plan (CERP) for Accidental Releases of Untreated Groundwater from SRP North Indian Bend Wash Site Extraction Wells", prepared by SRP, dated January 2007 describes the training to be conducted for personnel responding to an accidental release of untreated groundwater from an SRP facility.

<u>Section VI.B.4.f and g – land disposal of untreated groundwater:</u>

The NIBW PCs, SRP, and COS have not placed untreated groundwater in any salt dome formation, salt bed formation, underground mine or cave, surface impoundments, waste piles, land treatment units, incinerators, or landfills.

Section VI.B.4.h – emergency and contingency response plans:

The EPA approved Contingency and Emergency Response Plans (CERPs) for the CGTF, MRTF, Area 7 GWETS, Area 12 GWETS, and SRP Extraction Wells on July 11, 2007. The NIBW PCs prepared CERPs for the MRTF and Area 7 and Area 12 GWETS, the COS prepared the CGTF CERP, and SRP prepared the CERP for SRP extraction wells used in the NIBW Site remedial actions. There have been no emergency response actions or other incidents triggering the requirements of the CERPs in 2007.

Section VI.B.4.i – emergency coordinators:

The CERPS prepared by the NIBW PCs, COS, and SRP list designated emergency response coordinators for the four groundwater treatment facilities and the extraction well network. Currently identified personnel responsible for emergency response at the NIBW groundwater treatment facilities are listed in **Appendix A**.

Section VI.B.4.j – evidence of Holocene faults:

The NIBW PCs and SRP provided written verification in submittals dated August 1, 2003 and September 3, 2003, respectively, to EPA and ADEQ that none of the existing NIBW extraction wells and treatment systems are located within 200 feet of a fault, which has exhibited displacement in Holocene time. There are no recognized Holocene faults in the metropolitan Phoenix area. COS also provided this verification in July 2003.

Section VI.B.4.k – floodplains:

The COS, NIBW PCs, and SRP provided information in submittals dated July, August, and September, 2003, respectively, to EPA and ADEQ to confirm that four NIBW extraction wells are in locations that would be inundated by a 100-year flood. The NIBW PCs described measures for operating the wells in the draft Groundwater Extraction Well Network O&M Plan to ensure that there will not be a release of untreated groundwater during a 100-year storm.

Section VI.B.4.l – closure:

In 2007, the NIBW PCs formally abandoned 11 NIBW groundwater monitoring wells at the NIBW Site as described in Section 1.0 of this report. The City and SRP did not abandon any wells associated with the NIBW project. There were no facility closure activities in 2007.

5.0 SUMMARY

As set forth herein, the NIBW Superfund Site remedial actions continue to result in a functional and effective groundwater remedy. The collective remediation efforts through 2007 have achieved significant progress toward the long-term goal of aquifer restoration while providing beneficial use of vital groundwater resources. Continued progress is anticipated through ongoing operation, maintenance, and monitoring of the NIBW remedial action program in 2008. Under separate cover, the NIBW PCs will provide an investigation report detailing the incident at the MRTF described in Section 2.2.2.

6.0 DOCUMENTS SUBMITTED IN 2007

During the period January through December 2007, the NIBW PCs and SRP provided the following documents to EPA and ADEQ:

"Contingency and Emergency Response Plan: Miller Road Treatment Facility", submitted by NIBW PCs on January 15, 2007.

"Contingency and Emergency Response Plan: Area 7 Groundwater Extraction and Treatment System", submitted by NIBW PCs on January 15, 2007.

"Contingency and Emergency Response Plan: Area 12 Groundwater Extraction and Treatment System", submitted by SRP on January 15, 2007.

"Revisions to Remedial Design Remedial Action (RD/RA) Work Plan", submitted by NIBW PCs on January 15, 2007.

"Planned Annual Water Discharges to Salt River Project", submitted by NIBW PCs to SRP with copies to EPA and ADEQ on January 22, 2007.

"NIBW Technical Committee Meeting, November 28, 2006", submitted by NIBW PCs on January 19, 2007.

"Revised Human Health Risk Assessments for Central Groundwater Treatment Facility and Area 7 Groundwater Extraction and Treatment System", submitted by NIBW PCs on February 23, 2007.

"Results of December 2006 Air Sampling at Groundwater Treatment Facilities, North Indian Bend Wash Superfund Site", submitted by NIBW PCs on February 27, 2007.

"Groundwater Monitoring Program Data, North Indian Bend Wash Superfund Site", submitted by NIBW PCs on February 27, 2007.

"2006 Groundwater Extraction and Treatment System Data, North Indian Bend Wash Superfund Site", submitted by NIBW PCs on February 27, 2007.

"2006 Site Monitoring Report, North Indian Bend Wash Superfund Site, Scottsdale, Arizona", submitted by NIBW PCs on March 9, 2007.

“NIBW Annual Data Submittal to ADEQ for 2006”, submitted by SRP to ADEQ on April 4, 2007 with NIBW PCs providing copy to EPA.

“Response to Comments on Draft Human Health Risk Assessments, North Indian Bend Wash Superfund Site”, submitted by NIBW PCs on April 23, 2007.

“Demonstration of Financial Ability, North Indian Bend Wash Superfund Site”, submitted by NIBW PCs on May 25, 2007

“January through March 2007 Quarterly Report, North Indian Bend Wash Superfund Site”, submitted by NIBW PCs on May 31, 2007.

“Work Plan, Implementation of Insitu Chemical Oxidation using Potassium Permanganate to Optimize the Area 7 Soil Remedial Action”, submitted by NIBW PCs on May 31, 2007.

“Consumer Confidence Report, Arizona-American Water Company”, submitted by NIBW PCs on June 26, 2007.

“Revised Communication Plan”, submitted by NIBW PCs on June 27, 2007.

“Human Health Risk Assessments, North Indian Bend Wash Superfund Site, Scottsdale, Arizona”, submitted by NIBW PCs to Maricopa County Air Quality Department with copies to EPA and ADEQ on July 11, 2007.

“Submittal of Final Work Products Required by NIBW Statement of Work”, submitted by NIBW PCs on August 13, 2007.

“April through June 2007 Quarterly Report, North Indian Bend Wash Superfund Site”, submitted by NIBW PCs on August 29, 2007.

“Central Groundwater Treatment Facility, North Indian Bend Wash Superfund Site, Scottsdale, Arizona”, submitted Reasonably Available Control Technology analysis by NIBW PCs to Maricopa County Air Quality Department with copies to EPA and ADEQ on September 11, 2007.

“North Indian Bend Wash Area 7 Soil Vapor Extraction and Treatment System Startup Workplan”, submitted by LFR on behalf of NIBW PCs on November 8, 2007.

“Sample Results from Miller Road Treatment Facility”, submitted by NIBW PCs on November 14, 2007.

"July through September 2007 Quarterly Report, North Indian Bend Wash Superfund Site", submitted by the NIBW PCs on November 30, 2007.

"Response Awaited to Information Submitted to MCAQD Concerning the Applicability of MCAQD Rule 330, Section 306 to the Operation of the Groundwater Treatment Systems at the NIBW CERCLA Site", submitted by NIBW PCs to Maricopa County Air Quality Department with copies to EPA and ADEQ on December 3, 2007.

"Response to Attachment 2 of EPA Letter Dated December 14, 2007", submitted by NIBW PCs on December 21, 2007.

TABLES

TABLE 1. SUMMARY OF GROUNDWATER LEVEL MEASUREMENTS BY SALT RIVER PROJECT, NORTH INDIAN BEND WASH AREA, SCOTTSDALE, ARIZONA, APRIL 2007

Well No	Date & Time of Measurement	Depth to Water (feet)	Groundwater Elevation (feet)
B-1MA	4/4/2007 9:57	100.05	1091.4
B-1UA	4/4/2007 9:55	57.21	1134.2
B-3UA	4/4/2007 10:01	58.90	1132.8
B-J	4/4/2007 10:33	63.98	1127.5
D-1UA	4/3/2007 11:47	86.08	1139.7
D-2MA	4/3/2007 10:40	125.72	1113.9
E-1LA	4/5/2007 7:54	158.64	1055.7
E-1MA	4/5/2007 7:54	127.41	1086.3
E-1UA	4/5/2007 7:55	78.73	1136.0
E-2UA	4/4/2007 11:08	95.40	1129.0
E-3UA	4/3/2007 11:26	119.12	1104.6
E-4UA	4/3/2007 11:40	90.96	1137.8
E-5MA	4/4/2007 10:25	110.86	1088.1
E-5UA	4/4/2007 10:24	71.79	1127.2
E-6UA	4/3/2007 13:57	102.55	1118.5
E-7LA	4/4/2007 10:16	126.63	1070.8
E-7UA	4/4/2007 10:20	75.73	1124.5
E-8MA	4/4/2007 10:34	104.00	1088.7
E-9UA	4/4/2007 8:45	91.49	1118.2
E-10MA	4/3/2007 10:51	157.91	1088.0
E-12UA	4/4/2007 10:41	69.65	1133.8
E-13UA	4/4/2007 10:46	75.52	1132.6
E-14LA	4/4/2007 7:31	189.34	1064.3
M-1MA	4/4/2007 11:41	124.56	1086.9
M-2LA	4/4/2007 10:57	147.89	1062.5
M-2MA	4/4/2007 11:01	122.85	1087.5
M-2UA	4/4/2007 11:00	78.55	1132.7
M-3MA	4/4/2007 10:52	114.65	1091.1
M-3UA	4/4/2007 10:54	71.10	1136.1
M-4MA	4/4/2007 11:44	127.90	1086.9
M-4UA	4/4/2007 11:45	82.44	1133.9
M-5LA	4/4/2007 11:28	160.00	1057.9
M-5MA	4/4/2007 11:27	125.72	1092.1
M-5UA	4/4/2007 11:25	87.20	1131.6
M-6MA	4/4/2007 11:33	130.53	1088.1
M-7MA	4/5/2007 7:55	124.29	1088.7
M-8UA	4/5/2007 5:06	Well Inaccessible	
M-9LA	4/4/2007 6:55	168.33	1051.6
M-9MA	4/4/2007 6:58	120.03	1099.7
M-9UA	4/4/2007 6:56	82.36	1137.3
M-10LA2	4/4/2007 8:19	159.05	1060.1
M-10MA2	4/4/2007 8:17	129.22	1090.6
M-11MA	4/3/2007 13:41	115.44	1095.4
M-11UA	4/3/2007 13:39	84.52	1126.3
M-12MA	4/3/2007 13:28	145.40	1080.9
M-12UA	4/3/2007 13:26	97.79	1128.6
M-13UA	4/4/2007 11:48	84.77	1131.3
M-14LA	4/4/2007 11:06	170.51	1054.2
M-14MA	4/4/2007 11:07	126.70	1097.9

TABLE 1. SUMMARY OF GROUNDWATER LEVEL MEASUREMENTS BY SALT RIVER PROJECT, NORTH INDIAN BEND WASH AREA, SCOTTSDALE, ARIZONA, APRIL 2007

Well No	Date & Time of Measurement	Depth to Water (feet)	Groundwater Elevation (feet)
M-15MA	4/3/2007 13:07	124.86	1093.8
M-15UA	4/3/2007 13:09	84.05	1134.5
M-16LA	4/3/2007 13:15	178.08	1049.6
M-16MA	4/3/2007 13:18	125.34	1102.4
M-16UA	4/3/2007 13:16	95.59	1131.8
M-17MA/LA	4/4/2007 7:17	170.25	1067.5
PA-1MA	4/3/2007 11:44	114.02	1111.0
PA-2LA	4/3/2007 8:11	274.64	978.7
PA-3MA	4/3/2007 8:10	143.45	1109.5
PA-4MA	4/3/2007 9:57	119.56	1110.8
PA-5LA	4/3/2007 9:55	244.30	984.7
PA-6LA	4/3/2007 9:41	281.05	971.6
PA-7MA	4/3/2007 9:46	138.56	1114.1
PA-8LA	4/3/2007 13:24	188.20	1039.2
PA-9LA	4/3/2007 11:03	202.48	1032.3
PA-10MA	4/3/2007 11:05	156.98	1077.9
PA-11LA	4/3/2007 13:48	168.62	1055.7
PA-12MA	4/3/2007 13:51	147.11	1077.2
PA-13LA	4/3/2007 9:06	265.95	982.8
PA-14MA	4/3/2007 9:08	146.15	1102.6
PA-15LA	4/4/2007 9:09	122.91	1081.1
PA-16MA	4/4/2007 9:11	115.23	1088.8
PA-17MA	4/3/2007 10:08	134.00	1104.3
PA-18LA	4/3/2007 10:11	221.31	1017.1
PA-19LA	4/4/2007 8:34	147.16	1074.5
PA-20MA	4/4/2007 8:32	144.06	1077.3
PA-21MA	4/3/2007 12:43	119.70	1105.1
PA-22LA	4/4/2007 9:50	108.61	1075.0
PA-23MA	4/4/2007 9:47	90.94	1093.1
PG-1LA	4/3/2007 7:59	284.40	964.9
PG-2LA	4/3/2007 7:52	308.63	962.1
PG-3UA	4/4/2007 9:07	83.04	1120.9
PG-4MA	4/5/2007 7:55	149.70	1077.4
PG-4UA	4/5/2007 7:55	117.47	1109.8
PG-5MA	4/4/2007 8:51	133.50	1080.3
PG-5UA	4/4/2007 8:52	96.52	1117.4
PG-6MA	4/4/2007 9:03	115.29	1097.2
PG-6UA	4/4/2007 9:02	97.10	1115.5
PG-7MA	4/4/2007 9:35	106.42	1090.9
PG-7UA	4/4/2007 9:36	75.59	1121.4
PG-8UA	4/4/2007 8:39	106.71	1115.3
PG-9UA	4/3/2007 9:23	126.35	1125.5
PG-10UA	4/3/2007 10:30	111.19	1129.2
PG-11UA	4/3/2007 11:21	107.78	1122.1
PG-12UA	4/3/2007 11:31	99.80	1130.7
PG-13UA	4/3/2007 13:32	97.09	1129.0
PG-14UA	4/3/2007 12:59	94.55	1132.5
PG-15UA	4/3/2007 12:52	92.99	1136.0
PG-16UA	4/3/2007 10:54	116.92	1124.7
PG-17UA	4/3/2007 11:52	84.95	1140.4

TABLE 1. SUMMARY OF GROUNDWATER LEVEL MEASUREMENTS BY SALT RIVER PROJECT, NORTH INDIAN BEND WASH AREA, SCOTTSDALE, ARIZONA, APRIL 2007

Well No	Date & Time of Measurement	Depth to Water (feet)	Groundwater Elevation (feet)
PG-18UA	4/4/2007 6:23	76.90	1124.8
PG-19UA	4/4/2007 10:09	81.19	1122.8
PG-20UA	4/3/2007 14:00	97.74	1118.8
PG-21UA	4/4/2007 7:08	83.40	1124.2
PG-22UA	4/4/2007 8:23	82.55	1127.4
PG-23MA/LA	4/4/2007 9:20	136.23	1085.8
PG-23UA	4/4/2007 9:21	111.28	1111.3
PG-24UA	4/4/2007 9:15	94.40	1117.4
PG-25UA	4/4/2007 6:28	83.80	1122.2
PG-26UA	4/4/2007 10:48	70.36	1135.1
PG-27UA	4/4/2007 9:40	59.50	1129.7
PG-28UA	4/3/2007 11:12	107.45	1127.1
PG-29UA	4/3/2007 10:20	103.75	1128.7
PG-30UA	4/3/2007 11:16	100.24	1125.6
PG-31UA	4/3/2007 10:59	111.40	1123.7
PG-32UA	4/3/2007 13:02	92.25	1132.4
PG-33UA	4/3/2007 12:48	86.88	1138.5
PG-34UA	4/3/2007 12:55	92.28	1135.0
PG-35UA	4/3/2007 13:49	103.54	1120.6
PG-36UA	4/3/2007 10:48	117.95	1126.7
PG-37UA	4/4/2007 7:27	136.65	1106.0
PG-38MA/LA	4/4/2007 9:27	159.46	1077.4
PG-38UA	4/4/2007 9:28	137.75	1099.5
PG-39LA	4/4/2007 7:23	163.20	1069.0
PG-39UA	4/4/2007 7:22	122.41	1109.7
PG-40LA	4/3/2007 8:28	321.65	953.7
PG-42LA	4/3/2007 8:39	341.00	951.3
PG-43LA	4/3/2007 8:22	313.70	951.3
PG-44LA	4/3/2007 8:49	343.52	954.1
PG-47MA	4/4/2007 11:34	131.70	1086.1
PG-48MA	4/4/2007 11:36	136.52	1081.4
PG-50MA	4/3/2007 10:34	164.71	1076.0
PG-51MA	4/3/2007 10:35	166.55	1074.2
PG-57MA	4/3/2007 12:35	122.39	1104.4
S-1LA	4/3/2007 9:17	263.85	995.8
S-1MA	4/3/2007 9:18	154.55	1104.9
S-2LA	4/4/2007 6:40	287.96	971.4
S-2MA	4/3/2007 9:00	161.63	1098.4
ST-1UA	4/4/2007 11:40	76.45	1135.6
W-1MA	4/3/2007 10:24	135.02	1094.4
W-2MA	4/3/2007 11:10	156.25	1078.1
W-3UA	4/3/2007 11:36	100.81	1131.1

TABLE 2. SUMMARY OF GROUNDWATER LEVEL MEASUREMENTS BY SALT RIVER PROJECT, NORTH INDIAN BEND WASH AREA, SCOTTSDALE, ARIZONA, OCTOBER 2007

Well No	Date & Time of Measurement	Depth to Water (feet)	Groundwater Elevation (feet)
B-1MA	10/3/2007 9:54	96.14	1095.3
B-1UA	10/3/2007 9:51	60.30	1131.1
B-3UA	10/3/2007 9:57	61.88	1129.8
B-J	10/3/2007 10:19	66.29	1125.2
D-1UA	10/2/2007 10:48	82.60	1143.2
D-2MA	10/2/2007 9:34	125.15	1114.5
E-1LA	10/3/2007 11:55	166.65	1047.7
E-1MA	10/3/2007 11:56	126.12	1087.6
E-1UA	10/3/2007 11:56	77.75	1137.0
E-2UA	10/3/2007 7:02	95.35	1129.1
E-3UA	10/2/2007 10:18	99.17	1124.5
E-4UA	10/2/2007 10:38	88.60	1140.2
E-5MA	10/3/2007 10:35	112.81	1086.2
E-5UA	10/3/2007 10:36	73.14	1125.9
E-6UA	10/2/2007 13:13	100.55	1120.5
E-7LA	10/3/2007 10:31	136.81	1060.6
E-7UA	10/3/2007 10:31	76.90	1123.3
E-8MA	10/3/2007 10:22	105.85	1086.9
E-9UA	10/3/2007 7:47	93.31	1116.4
E-10MA	10/2/2007 9:07	160.03	1085.9
E-12UA	10/3/2007 10:00	69.20	1134.2
E-13UA	10/3/2007 6:17	76.66	1131.4
E-14LA	10/2/2007 13:33	198.30	1055.3
M-1MA	10/3/2007 12:09	119.78	1091.7
M-2LA	10/3/2007 10:14	153.75	1056.7
M-2MA	10/3/2007 10:13	119.19	1091.1
M-2UA	10/3/2007 10:13	78.65	1132.6
M-3MA	10/3/2007 10:08	107.73	1098.0
M-3UA	10/3/2007 10:09	70.55	1136.7
M-4MA	10/3/2007 12:13	124.05	1090.8
M-4UA	10/3/2007 12:14	82.60	1133.7
M-5LA	10/3/2007 11:37	169.49	1048.4
M-5MA	10/3/2007 11:34	125.84	1092.0
M-5UA	10/3/2007 11:38	87.10	1131.7
M-6MA	10/3/2007 11:44	127.70	1090.9
M-7MA	10/3/2007 12:02	122.71	1090.3
M-8UA	8/28/2007	Well Removed	
M-9LA	10/3/2007 6:52	181.32	1038.6
M-9MA	10/3/2007 6:52	117.25	1102.5
M-9UA	10/3/2007 6:52	80.32	1139.4
M-10LA2	10/3/2007 7:08	172.16	1046.9
M-10MA2	10/3/2007 7:06	130.26	1089.5
M-11MA	10/2/2007 12:45	121.60	1089.2
M-11UA	10/2/2007 12:45	84.95	1125.9
M-12MA	8/30/2007	Well Replaced	
M-12MA2	10/2/2007 12:34	185.60	NA
M-12UA	8/30/2007	Well Removed	
M-13UA	10/3/2007 12:17	85.60	1130.5
M-14LA	10/3/2007 7:00	185.15	1039.6

TABLE 2. SUMMARY OF GROUNDWATER LEVEL MEASUREMENTS BY SALT RIVER PROJECT, NORTH INDIAN BEND WASH AREA, SCOTTSDALE, ARIZONA, OCTOBER 2007

Well No	Date & Time of Measurement	Depth to Water (feet)	Groundwater Elevation (feet)
M-14MA	10/3/2007 7:01	130.11	1094.5
M-15MA	10/2/2007 12:15	124.25	1094.5
M-15UA	10/2/2007 12:15	84.25	1134.3
M-16LA	10/2/2007 12:02	195.61	1032.1
M-16MA	10/2/2007 12:00	129.50	1098.2
M-16UA	10/2/2007 12:00	95.25	1132.2
M-17MA/LA	10/2/2007 13:28	180.76	1056.9
PA-1MA	10/2/2007 10:41	113.95	1111.1
PA-2LA	10/3/2007 6:37	298.86	954.4
PA-3MA	10/2/2007 8:08	125.02	1127.9
PA-4MA	10/2/2007 8:29	114.48	1115.9
PA-5LA	10/2/2007 8:27	277.81	951.2
PA-6LA	10/2/2007 7:59	304.90	947.7
PA-7MA	10/2/2007 7:57	131.69	1121.0
PA-8LA	8/31/2007	Well Replaced	
PA-8LA2	10/2/2007 14:14	214.30	NA
PA-9LA	10/2/2007 10:06	222.50	1012.3
PA-10MA	10/2/2007 10:08	161.90	1073.0
PA-11LA	10/2/2007 13:07	187.35	NA
PA-12MA	10/2/2007 13:07	156.20	NA
PA-13LA	10/2/2007 8:43	291.29	957.4
PA-14MA	10/2/2007 8:43	141.85	1106.9
PA-15LA	10/3/2007 8:06	128.64	1075.4
PA-16MA	10/3/2007 8:06	120.55	1083.5
PA-17MA	10/2/2007 8:16	123.80	1114.5
PA-18LA	10/2/2007 8:16	244.97	993.4
PA-19LA	10/3/2007 7:41	155.50	1066.2
PA-20MA	10/3/2007 7:40	152.25	1069.2
PA-21MA	10/2/2007 10:53	116.50	1108.3
PA-22LA	10/3/2007 9:29	110.00	1073.6
PA-23MA	10/3/2007 9:30	89.15	1094.9
PG-1LA	10/2/2007 7:47	307.14	942.2
PG-2LA	10/2/2007 7:40	340.75	930.0
PG-3UA	10/3/2007 8:02	86.37	1117.5
PG-4MA	10/3/2007 8:24	157.14	1070.0
PG-4UA	10/3/2007 8:24	120.50	1106.8
PG-5MA	10/3/2007 7:53	140.10	1073.7
PG-5UA	10/3/2007 7:53	99.10	1114.8
PG-6MA	10/3/2007 7:59	120.65	1091.9
PG-6UA	10/3/2007 7:59	100.85	1111.8
PG-7MA	10/3/2007 9:16	111.11	1086.2
PG-7UA	10/3/2007 9:16	80.10	1116.9
PG-8UA	10/3/2007 7:40	108.55	1113.5
PG-9UA	10/2/2007 9:00	125.40	1126.4
PG-10UA	10/2/2007 9:20	110.89	1129.5
PG-11UA	10/2/2007 10:13	107.71	1122.2
PG-12UA	10/2/2007 10:29	99.25	1131.3
PG-13UA	10/2/2007 12:37	97.00	1129.1
PG-14UA	8/31/2007	Well Removed	
PG-15UA	10/2/2007 11:05	91.27	1137.7

TABLE 2. SUMMARY OF GROUNDWATER LEVEL MEASUREMENTS BY SALT RIVER PROJECT, NORTH INDIAN BEND WASH AREA, SCOTTSDALE, ARIZONA, OCTOBER 2007

Well No	Date & Time of Measurement	Depth to Water (feet)	Groundwater Elevation (feet)
PG-16UA	10/2/2007 9:13	116.50	1125.1
PG-17UA	10/2/2007 10:49	81.50	1143.8
PG-18UA	10/3/2007 9:09	79.92	1121.8
PG-19UA	10/3/2007 9:07	83.34	1120.7
PG-20UA	10/2/2007 13:16	98.96	1117.5
PG-21UA	10/2/2007 13:21	83.93	1123.7
PG-22UA	10/3/2007 9:31	83.45	1126.5
PG-23MA/LA	10/3/2007 8:16	142.41	1079.6
PG-23UA	10/3/2007 8:17	114.36	1108.2
PG-24UA	10/3/2007 8:11	97.42	1114.4
PG-25UA	10/3/2007 9:03	85.66	1120.3
PG-26UA	10/3/2007 10:04	71.72	1133.8
PG-27UA	10/3/2007 9:20	63.58	1125.6
PG-28UA	10/2/2007 9:57	107.30	1127.2
PG-29UA	10/2/2007 9:51	103.34	1129.1
PG-30UA	10/3/2007 8:50	99.96	1125.8
PG-31UA	10/2/2007 10:02	111.05	1124.1
PG-32UA	10/2/2007 12:08	91.70	1132.9
PG-33UA	10/2/2007 11:09	84.64	1140.8
PG-34UA	10/2/2007 11:14	90.85	1136.5
PG-35UA	4/26/2007	Well Removed	
PG-36UA	10/2/2007 9:10	117.51	1127.1
PG-37UA	10/2/2007 13:49	Dry Well	
PG-38MA/LA	10/2/2007 13:55	167.00	1069.9
PG-38UA	10/2/2007 13:53	Dry Well	
PG-39LA	10/2/2007 13:44	173.14	1059.1
PG-39UA	10/2/2007 13:41	124.20	1107.9
PG-40LA	10/2/2007 7:15	339.72	935.6
PG-42LA	10/2/2007 7:22	358.45	933.9
PG-43LA	10/2/2007 7:10	329.69	935.3
PG-44LA	10/2/2007 7:35	363.62	934.0
PG-47MA	10/3/2007 11:46	127.64	1090.2
PG-48MA	10/3/2007 11:48	132.66	1085.2
PG-49MA	10/3/2002 9:34	230.00	980.2
PG-50MA	10/2/2007 9:26	172.10	1068.6
PG-51MA	10/2/2007 9:25	174.05	1066.7
PG-54MA	10/2/2002 13:50	184.53	1040.1
PG-55MA	10/3/2002 9:01	219.40	1006.0
PG-56MA	10/3/2002 8:55	205.29	1026.1
PG-57MA	10/2/2007 10:59	114.50	1112.3
S-1LA	10/2/2007 8:55	282.45	977.2
S-1MA	10/2/2007 8:55	156.00	1103.4
S-2LA	10/3/2007 6:27	308.95	950.5
S-2MA	10/2/2007 8:47	161.45	1098.6
ST-1UA	10/3/2007 12:08	76.25	1135.8
W-1MA	10/2/2007 9:47	130.55	1098.9
W-2MA	10/2/2007 9:57	158.35	1076.0
W-3UA	10/2/2007 10:33	100.14	1131.8

Note:
NA = No Data Available

TABLE 3. SUMMARY OF WATER LEVEL DIFFERENCE BETWEEN OCTOBER 2006 AND OCTOBER 2007 NORTH INDIAN BEND WASH AREA, SCOTTSDALE, ARIZONA

Monitor Well Identifier	Alluvium Unit	October 2006 Depth to Groundwater Level (feet)	October 2007 Depth to Groundwater Level (feet)	Change in Depth to Groundwater Level (feet)
PG-10	U	114.32	110.89	3.43
PG-36	U	121.51	117.51	4.00
PG-29	U	106.44	103.34	3.10
PG-16	U	120.66	116.50	4.16
PG-28	U	110.58	107.30	3.28
PG-31	U	115.25	111.05	4.20
M-12	U	92.95	185.60	-92.65
E-4	U	89.53	88.60	0.93
PG-30	U	103.54	99.96	3.58
W-3	U	101.51	100.14	1.37
PG-17	U	81.67	81.50	0.17
D-1	U	82.91	82.60	0.31
PG-12	U	101.19	99.25	1.94
PG-11	U	111.95	107.71	4.24
E-3	U	102.69	99.17	3.52
PG-15	U	92.40	91.27	1.13
PG-33	U	85.35	84.64	0.71
PG-35	U	107.89	Well Removed	---
PG-34	U	91.76	90.85	0.91
PG-13	U	99.22	97.00	2.22
M-16	U	96.70	95.25	1.45
PG-14	U	95.17	Well Removed	---
M-9	U	80.52	80.32	0.20
E-2	U	97.35	95.35	2.00
PG-32	U	91.65	91.70	-0.05
M-11	U	87.37	84.95	2.42
E-6	U	107.77	100.55	7.22
PG-39	U	128.68	124.20	4.48
PG-21	U	86.32	83.93	2.39
PG-20	U	102.40	98.96	3.44
M-15	U	84.69	84.25	0.44
M-10	U	Well Removed	Well Removed	---
E-1	U	76.54	77.75	-1.21
PG-8	U	111.14	108.55	2.59
M-5	U	Well Obstructed	87.10	---
E-7	U	78.66	76.90	1.76
PG-22	U	84.03	83.45	0.58
E-9	U	94.84	93.31	1.53
ST-1	U	74.52	76.25	-1.73
PG-4	U	123.74	120.50	3.24
M-4	U	81.34	82.60	-1.26
M-13	U	84.85	85.60	-0.75
PG-25	U	Well Inaccessible	85.66	---
PG-5	U	100.54	99.10	1.44
E-5	U	73.31	73.14	0.17
M-8	U	Well Inaccessible	Well Removed	---
M-2	U	77.88	78.65	-0.77
M-3	U	68.92	70.55	-1.63
PG-23	U	116.55	114.36	2.19
PG-19	U	83.47	83.34	0.13
E-13	U	74.86	76.66	-1.80
PG-24	U	98.30	97.42	0.88
B-J	U	65.20	66.29	-1.09
PG-26	U	68.98	71.72	-2.74
E-12	U	69.03	69.20	-0.17
PG-6	U	101.06	100.85	0.21
PG-18	U	79.02	79.92	-0.90
PG-3	U	85.98	86.37	-0.39
B-3	U	58.87	61.88	-3.01
B-1	U	56.87	60.30	-3.43
PG-27	U	60.88	63.58	-2.70
PG-7	U	77.97	80.10	-2.13
PA-7	M	133.71	131.69	2.02
PA-3	M	152.53	125.02	27.51
S-2	M	166.76	161.45	5.31
PA-4	M	115.56	114.48	1.08

TABLE 3. SUMMARY OF WATER LEVEL DIFFERENCE BETWEEN OCTOBER 2006 AND OCTOBER 2007 NORTH INDIAN BEND WASH AREA, SCOTTSDALE, ARIZONA

Monitor Well Identifier	Alluvium Unit	October 2006 Depth to Groundwater Level (feet)	October 2007 Depth to Groundwater Level (feet)	Change in Depth to Groundwater Level (feet)
PA-14	M	148.14	141.85	6.29
S-1	M	161.75	156.00	5.75
D-2	M	126.60	125.15	1.45
PG-50	M	166.14	172.10	-5.96
PG-51	M	172.20	174.05	-1.85
PA-17	M	122.63	123.80	-1.17
W-1	M	131.44	130.55	0.89
E-10	M	164.05	160.03	4.02
W-2	M	157.74	158.35	-0.61
M-12	M	161.62	185.60	-23.98
PA-10	M	164.51	161.90	2.61
PA-1	M	111.31	113.95	-2.64
PA-12	M	161.97	156.20	5.77
M-16	M	129.85	129.50	0.35
PA-21	M	116.91	116.50	0.41
PG-57	M	113.11	114.50	-1.39
M-9	M	119.85	117.25	2.60
M-14	M	132.93	130.11	2.82
M-11	M	125.40	121.60	3.80
M-15	M	132.15	124.25	7.90
M-10	M	Well Removed	130.26	---
M-6	M	136.85	127.70	9.15
PG-47	M	127.22	127.64	-0.42
PG-48	M	138.55	132.66	5.89
E-1	M	132.29	126.12	6.17
PA-20	M	No Access to Well	152.25	---
M-5	M	146.94	125.84	21.10
M-7	M	127.52	122.71	4.81
PG-4	M	163.12	157.14	5.98
M-1	M	123.92	119.78	4.14
M-4	M	129.41	124.05	5.36
PG-5	M	145.14	140.10	5.04
E-5	M	119.39	112.81	6.58
M-2	M	122.95	119.19	3.76
M-3	M	107.92	107.73	0.19
PG-23	M	146.97	142.41	4.56
E-8	M	109.25	105.85	3.40
PG-6	M	123.21	120.65	2.56
PA-16	M	123.24	120.55	2.69
B-1	M	94.60	96.14	-1.54
PG-7	M	113.00	111.11	1.89
PA-23	M	87.67	89.15	-1.48
PG-43	L	346.99	329.69	17.30
PG-42	L	375.06	358.45	16.61
PG-40	L	357.23	339.72	17.51
PG-44	L	378.06	363.62	14.44
PG-1	L	322.77	307.14	15.63
PG-2	L	356.60	340.75	15.85
PA-6	L	319.45	304.90	14.55
PA-2	L	313.43	298.86	14.57
S-2	L	327.55	308.95	18.60
PA-5	L	291.15	277.81	13.34
PA-13	L	305.03	291.29	13.74
S-1	L	297.19	282.45	14.74
PA-18	L	253.33	244.97	8.36
PA-8	L	216.79	214.30	2.49
PA-9	L	232.53	222.50	10.03
E-14	L	211.85	198.30	13.55
M-17MA/LA	L	193.12	180.76	12.36
PA-11	L	196.01	187.35	8.66
M-16	L	199.86	195.61	4.25
M-9	L	185.89	181.32	4.57
M-14	L	190.08	185.15	4.93
M-10	L	Well Removed	172.16	---
E-1	L	171.28	166.65	4.63
PA-19	L	No Access to Well	155.50	---

TABLE 3. SUMMARY OF WATER LEVEL DIFFERENCE BETWEEN OCTOBER 2006 AND OCTOBER 2007 NORTH INDIAN BEND WASH AREA, SCOTTSDALE, ARIZONA

Monitor Well Identifier	Alluvium Unit	October 2006 Depth to Groundwater Level (feet)	October 2007 Depth to Groundwater Level (feet)	Change in Depth to Groundwater Level (feet)
M-5	L	175.25	169.49	5.76
E-7	L	141.15	136.81	4.34
PG-39	L	184.02	173.14	10.88
PG-38	L	173.56	167.00	6.56
M-2	L	159.16	153.75	5.41
PA-15	L	132.32	128.64	3.68
PA-22	L	110.99	110.00	0.99

Notes:

U = Upper Alluvium Unit monitor well
M = Middle Alluvium Unit monitor well
L = Lower Alluvium Unit monitor well
--- = No Data Available

TABLE 4. 2007 LABORATORY RESULTS FOR VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER MONITORING WELLS NORTH INDIAN BEND WASH AREA, SCOTTSDALE, ARIZONA
(results presented in µg/L)

Location Type	Sample Location	Field Sample ID	Sample Date	Sample Time	Sample Type	Lab	1,1,1-TCA	1,1-DCE	TCM	PCE	TCE
MW	B-J	B-J	10/17/2007	10:38	PRI	SRP	<0.5	<0.5	**0.7**	<0.5	**3.1**
MW	D-1UA	D-1UA	10/16/2007	10:25	PRI	SRP	<0.5	<0.5	<0.5	<0.5	**11**
MW	D-2MA	D-2MA	1/4/2007	11:15	PRI	SRP	<0.5	<0.5	**1**	**4.8**	**690**
MW	D-2MA	D-2MA	4/11/2007	9:08	PRI	SRP	<0.5	<0.5	**1**	**5.2**	**660**
MW	D-2MA	D-2MA	7/11/2007	8:10	PRI	SRP	<0.5	<0.5	**1**	**5.7**	**760**
MW	D-2MA	PT-D-2MA	7/11/2007	8:12	PTS	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
MW	D-2MA	D-2MA	10/12/2007	9:48	PRI	SRP	<0.5	<0.5	**1.7**	**8.4**	**1200**
MW	E-10MA	E-10MA	1/4/2007	6:30	PRI	SRP	<0.5	<0.5	**0.5**	**2.7**	**6**
MW	E-10MA	DUP "C"	1/4/2007	0:00	DUP	SRP	<0.5	<0.5	<0.5	**2.6**	**5.8**
MW	E-10MA	E-10MA	4/11/2007	6:25	PRI	SRP	<0.5	<0.5	<0.5	**3**	**5.6**
MW	E-10MA	DUP "D"	4/11/2007	0:00	DUP	SRP	<0.5	<0.5	<0.5	**3.1**	**5.6**
MW	E-10MA	E-10MA	7/11/2007	6:25	PRI	SRP	<0.5	<0.5	<0.5	**2.6**	**4.6**
MW	E-10MA	DUP "F"	7/11/2007	0:00	DUP	SRP	<0.5	<0.5	<0.5	**2.9**	**4.8**
MW	E-10MA	E-10MA	10/11/2007	6:50	PRI	SRP	<0.5	<0.5	<0.5	**3.1**	**5.2**
MW	E-10MA	DUP "F"	10/11/2007	0:00	DUP	SRP	<0.5	<0.5	<0.5	**3.1**	**5**
MW	E-12UA	E-12UA	10/26/2007	9:50	PRI	SRP	<0.5	<0.5	**0.9**	<0.5	**4.1**
MW	E-13UA	E-13UA	10/23/2007	7:43	PRI	SRP	<0.5	<0.5	**0.5**	<0.5	**3.8**
MW	E-1MA	E-1MA	1/5/2007	7:35	PRI	SRP	<0.5	<0.5	<0.5	<0.5	**8.2**
MW	E-1MA	E-1MA	4/6/2007	7:20	PRI	SRP	<0.5	<0.5	<0.5	<0.5	**5.1**
MW	E-1MA	E-1MA	7/6/2007	6:54	PRI	SRP	<0.5	<0.5	**1.6**	**0.8**	NA
MW	E-1MA	E-1MA	7/13/2007	6:50	PRI	SRP	<0.5	<0.5	**1.4**	**0.7**	**30**
MW	E-1MA	PT-E-1MA	7/13/2007	6:52	PTS	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
MW	E-1MA	E-1MA	10/25/2007	7:12	PRI	SRP	<0.5	**0.7**	**3.3**	**1.9**	**66**
MW	E-1MA	DUP "N"	10/25/2007	0:00	DUP	SRP	<0.5	**0.7**	**3.3**	**1.9**	**65**
MW	E-3UA	E-3UA	10/26/2007	10:15	PRI	SRP	<0.5	<0.5	**0.8**	<0.5	<0.5
MW	E-5MA	E-5MA	1/4/2007	8:35	PRI	SRP	<0.5	**0.5**	**2.1**	**1.5**	**54**
MW	E-5MA	E-5MA	4/11/2007	11:30	PRI	SRP	<0.5	<0.5	**1.4**	**0.9**	**34**
MW	E-5MA	PT-E-5MA	4/11/2007	11:33	PTS	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
MW	E-5MA	E-5MA	7/3/2007	13:25	PRI	SRP	<0.5	<0.5	**1**	<0.5	**24**
MW	E-5MA	PT-E-5MA	7/3/2007	13:27	PTS	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
MW	E-5MA	E-5MA	10/17/2007	12:46	PRI	SRP	<0.5	<0.5	**1.2**	**0.8**	**32**
MW	E-5UA	E-5UA	10/17/2007	12:21	PRI	SRP	<0.5	<0.5	**0.8**	**0.7**	**9.5**
MW	E-7LA	E-7LA	10/23/2007	9:05	PRI	SRP	<0.5	<0.5	**1.7**	**1.2**	**32**
MW	E-7LA	DUP "L"	10/23/2007	0:00	DUP	SRP	<0.5	<0.5	**1.8**	**1.3**	**33**
MW	E-7UA	E-7UA	10/31/2007	10:22	PRI	SRP	<0.5	<0.5	**0.9**	**0.7**	**3.3**
MW	E-8MA	E-8MA	10/17/2007	11:05	PRI	SRP	<0.5	<0.5	<0.5	<0.5	**13**
MW	E-9UA	E-9UA	10/18/2007	11:55	PRI	SRP	<0.5	<0.5	**0.8**	**1.6**	**4.6**
MW	M-10LA2	M-10LA2	10/5/2007	13:45	PRI	SRP	<0.5	<0.5	**2.1**	**0.5**	**4.4**
MW	M-10LA2	PT M-10LA2	10/5/2007	13:47	PTS	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
MW	M-10MA	M-10MA	1/3/2007	14:25	PRI	SRP	<0.5	<0.5	<0.5	<0.5	**5.2**
MW	M-10MA	PT-M-10MA	1/3/2007	14:27	PTS	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
MW	M-10MA2	M-10MA2	4/5/2007	11:55	PRI	SRP	<0.5	<0.5	<0.5	<0.5	**13**
MW	M-10MA2	PT-M-10MA2	4/5/2007	11:58	PTS	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
MW	M-10MA2	M-10MA2	7/3/2007	12:25	PRI	SRP	<0.5	<0.5	<0.5	<0.5	**11**
MW	M-10MA2	M-10MA2	10/5/2007	12:40	PRI	SRP	<0.5	<0.5	<0.5	<0.5	**16**
MW	M-10MA2	DUP "C"	10/5/2007	0:00	DUP	SRP	<0.5	<0.5	<0.5	<0.5	**16**
MW	M-11MA	M-11MA	10/17/2007	8:36	PRI	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
MW	M-11MA	DUP "I"	10/17/2007	0:00	DUP	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
MW	M-12MA2	M-12MA2	10/11/2007	12:28	PRI	SRP	<0.5	<0.5	<0.5	<0.5	**15**
MW	M-13UA	M-13UA	10/19/2007	14:13	PRI	SRP	<0.5	<0.5	<0.5	**0.6**	**3.7**
MW	M-13UA	PT-M-13UA	10/19/2007	14:15	PTS	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
MW	M-14LA	M-14LA	10/11/2007	13:25	PRI	SRP	<0.5	<0.5	**1.8**	**1.5**	**38**
MW	M-15MA	M-15MA	1/4/2007	12:20	PRI	SRP	<0.5	<0.5	<0.5	<0.5	**12**
MW	M-15MA	M-15MA	4/11/2007	10:12	PRI	SRP	<0.5	<0.5	<0.5	**0.5**	**13**
MW	M-15MA	M-15MA	7/3/2007	11:45	PRI	SRP	<0.5	<0.5	<0.5	<0.5	**12**
MW	M-15MA	M-15MA	10/30/2007	8:22	PRI	SRP	<0.5	<0.5	<0.5	<0.5	**11**
MW	M-15MA	DUP "P"	10/30/2007	0:00	DUP	SRP	<0.5	<0.5	<0.5	<0.5	**11**
MW	M-16LA	M-16LA	10/16/2007	14:18	PRI	SRP	<0.5	<0.5	**1.7**	**0.5**	**4.8**
MW	M-16MA	M-16MA	10/16/2007	13:04	PRI	SRP	<0.5	**0.6**	<0.5	**0.8**	**16**
MW	M-16MA	PT-M-16MA	10/16/2007	13:06	PTS	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
MW	M-17MA/LA	M-17MA/LA	1/3/2007	12:18	PRI	SRP	<0.5	<0.5	**1.4**	**0.6**	**27**
MW	M-17MA/LA	DUP B	1/3/2007	0:00	DUP	SRP	<0.5	<0.5	**1.4**	**0.6**	**27**
MW	M-17MA/LA	M-17MA/LA	4/6/2007	11:10	PRI	SRP	<0.5	<0.5	**1.3**	**0.6**	**26**
MW	M-17MA/LA	DUP "C"	4/6/2007	0:00	DUP	SRP	<0.5	<0.5	**1.3**	**0.6**	**27**
MW	M-17MA/LA	M-17MA/LA	7/3/2007	11:15	PRI	SRP	<0.5	<0.5	**1.1**	<0.5	**17**
MW	M-17MA/LA	DUP "B"	7/3/2007	0:00	DUP	SRP	<0.5	<0.5	**1.1**	<0.5	**17**
MW	M-17MA/LA	M-17MA/LA	10/12/2007	13:35	PRI	SRP	<0.5	<0.5	**1.3**	<0.5	**12**
MW	M-17MA/LA	PT-M-17MA/LA	10/12/2007	13:38	PTS	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
MW	M-2MA	M-2MA	10/26/2007	13:15	PRI	SRP	<0.5	<0.5	<0.5	<0.5	**4.5**
MW	M-2UA	M-2UA	10/24/2007	13:27	PRI	SRP	<0.5	<0.5	**0.5**	<0.5	**5.5**
MW	M-2UA	PT-M-2UA	10/24/2007	13:30	PTS	SRP	<0.5	<0.5	<0.5	<0.5	<0.5

TABLE 4. 2007 LABORATORY RESULTS FOR VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER MONITORING WELLS NORTH INDIAN BEND WASH AREA, SCOTTSDALE, ARIZONA

(results presented in µg/L)

Location Type	Sample Location	Field Sample ID	Sample Date	Sample Time	Sample Type	Lab	1,1,1-TCA	1,1-DCE	TCM	PCE	TCE
MW	M-4MA	M-4MA	1/4/2007	13:15	PRI	SRP	<0.5	<0.5	1	0.6	18
MW	M-4MA	PT-M-4MA	1/4/2007	13:17	PTS	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
MW	M-4MA	M-4MA	4/11/2007	10:45	PRI	SRP	<0.5	<0.5	1	0.8	21
MW	M-4MA	M-4MA	7/5/2007	13:43	PRI	SRP	<0.5	<0.5	1	0.5	21
MW	M-4MA	PT-M-4MA	7/5/2007	13:45	PTS	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
MW	M-4MA	M-4MA	10/26/2007	12:46	PRI	SRP	<0.5	<0.5	1.2	0.6	22
MW	M-4MA	PT-M-4MA	10/26/2007	12:48	PTS	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
MW	M-5LA	M-5LA	10/25/2007	9:38	PRI	SRP	<0.5	<0.5	1.4	<0.5	3
MW	M-5MA	M-5MA	4/13/2007	8:43	PRI	SRP	<0.5	0.8	3.2	2.5	66
MW	M-5MA	M-5MA	7/6/2007	8:10	PRI	SRP	<0.5	2.2	1.4	4.3	50
MW	M-5MA	M-5MA	10/25/2007	8:53	PRI	SRP	<0.5	1	3.6	2.8	78
MW	M-6MA	M-6MA	2/7/2007	12:20	PRI	SRP	<0.5	<0.5	0.8	0.5	16
MW	M-6MA	PT-M-6MA	2/7/2007	12:23	PTS	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
MW	M-6MA	M-6MA	4/13/2007	10:02	PRI	SRP	<0.5	<0.5	1.5	0.9	26
MW	M-6MA	PT-M-6MA	4/13/2007	10:04	PTS	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
MW	M-6MA	M-6MA	7/6/2007	9:50	PRI	SRP	<0.5	<0.5	1.6	0.9	33
MW	M-6MA	PT-M-6MA	7/6/2007	9:52	PTS	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
MW	M-6MA	M-6MA	10/25/2007	13:40	PRI	SRP	<0.5	1.6	6.2	4.5	120
MW	M-6MA	PT-M-6MA	10/25/2007	13:42	PTS	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
MW	M-7MA	M-7MA	10/26/2007	12:13	PRI	SRP	<0.5	<0.5	<0.5	<0.5	1.4
MW	M-9MA	M-9MA	10/16/2007	8:15	PRI	SRP	<0.5	<0.5	<0.5	<0.5	4.4
MW	M-9MA	DUP "H"	10/16/2007	0:00	DUP	SRP	<0.5	<0.5	<0.5	<0.5	4.4
MW	PA-10MA	PA-10MA	1/4/2007	7:00	PRI	SRP	<0.5	<0.5	<0.5	0.7	41
MW	PA-10MA	PA-10MA	4/12/2007	6:25	PRI	SRP	<0.5	<0.5	<0.5	0.8	47
MW	PA-10MA	DUP "E"	4/12/2007	0:00	DUP	SRP	<0.5	<0.5	<0.5	0.8	47
MW	PA-10MA	PA-10MA	7/6/2007	6:10	PRI	SRP	<0.5	<0.5	<0.5	<0.5	26
MW	PA-10MA	DUP "D"	7/6/2007	0:00	DUP	SRP	<0.5	<0.5	<0.5	<0.5	24
MW	PA-10MA	PA-10MA	10/11/2007	8:28	PRI	SRP	<0.5	<0.5	<0.5	<0.5	26
MW	PA-12MA	PA-12MA	1/4/2007	7:50	PRI	SRP	<0.5	<0.5	0.5	4.1	440
MW	PA-12MA	PA-12MA	4/11/2007	9:40	PRI	SRP	<0.5	<0.5	0.6	4.1	400
MW	PA-12MA	PA-12MA	10/19/2007	8:10	PRI	SRP	<0.5	<0.5	<0.5	3.5	380
MW	PA-13LA	PA-13LA	4/13/2007	7:20	PRI	SRP	<0.5	0.5	0.9	1.8	34
MW	PA-13LA	DUP "F"	4/13/2007	0:00	DUP	SRP	<0.5	0.5	0.8	1.8	33
MW	PA-13LA	PA-13LA	10/12/2007	8:10	PRI	SRP	<0.5	<0.5	0.8	1.7	34
MW	PA-13LA	DUP "G"	10/12/2007	0:00	DUP	SRP	<0.5	<0.5	0.7	1.6	36
MW	PA-15LA	PA-15LA	10/18/2007	13:10	PRI	SRP	<0.5	<0.5	1.5	<0.5	0.5
MW	PA-16MA	PA-16MA	10/18/2007	12:30	PRI	SRP	<0.5	<0.5	0.8	0.7	20
MW	PA-18LA	PA-18LA	10/5/2007	9:30	PRI	SRP	<0.5	<0.5	4.4	<0.5	1.4
MW	PA-19LA	PA-19LA	10/23/2007	10:32	PRI	SRP	<0.5	1.6	2.5	4.6	84
MW	PA-20MA	PA-20MA	10/23/2007	10:49	PRI	SRP	<0.5	0.5	1	2.8	42
MW	PA-21MA	PA-21MA	10/16/2007	12:33	PRI	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
MW	PA-2LA	PA-2LA	10/4/2007	12:20	PRI	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
MW	PA-5LA	PA-5LA	10/5/2007	10:50	PRI	SRP	<0.5	4.2	5.5	13	180
MW	PA-6LA	PA-6LA	4/6/2007	9:05	PRI	SRP	<0.5	<0.5	<0.5	<0.5	160
MW	PA-6LA	PA-6LA	10/4/2007	10:50	PRI	SRP	<0.5	1.8	3.4	7.3	150
MW	PA-8LA2	PA-8LA2	10/11/2007	11:33	PRI	SRP	<0.5	<0.5	1.1	1.2	27
MW	PA-9LA	PA-9LA	10/11/2007	8:10	PRI	SRP	<0.5	<0.5	1.4	1.6	42
MW	PG-10UA	PG-10UA	10/10/2007	12:08	PRI	SRP	<0.5	<0.5	<0.5	<0.5	1.3
MW	PG-11UA	PG-11UA	10/23/2007	12:40	PRI	SRP	<0.5	<0.5	2.4	<0.5	1.9
MW	PG-15UA	PG-15UA	10/24/2007	12:53	PRI	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
MW	PG-16UA	PG-16UA	10/10/2007	13:15	PRI	SRP	<0.5	<0.5	<0.5	<0.5	4.5
MW	PG-18UA	PG-18UA	10/18/2007	10:46	PRI	SRP	<0.5	<0.5	0.8	<0.5	0.9
MW	PG-18UA	DUP "J"	10/18/2007	0:00	DUP	SRP	<0.5	<0.5	0.8	<0.5	1
MW	PG-19UA	PG-19UA	10/26/2007	8:33	PRI	SRP	<0.5	<0.5	0.8	<0.5	4.7
MW	PG-19UA	DUP "O"	10/26/2007	0:00	DUP	SRP	<0.5	<0.5	0.8	<0.5	4.7
MW	PG-1LA	PG-1LA	1/3/2007	10:45	PRI	SRP	<0.5	<0.5	<0.5	<0.5	2.2
MW	PG-1LA	PG-1LA	4/5/2007	11:00	PRI	SRP	<0.5	<0.5	<0.5	<0.5	2.5
MW	PG-1LA	PG-1LA	7/5/2007	12:57	PRI	SRP	<0.5	<0.5	<0.5	<0.5	2.3
MW	PG-1LA	DUP "C"	7/5/2007	0:00	DUP	SRP	<0.5	<0.5	<0.5	<0.5	2.3
MW	PG-1LA	PG-1LA	10/4/2007	9:35	PRI	SRP	<0.5	<0.5	<0.5	<0.5	2.5
MW	PG-22UA	PG-22UA	10/17/2007	10:15	PRI	SRP	<0.5	0.8	0.7	3.7	10
MW	PG-23MA/LA	PG-23MA/LA	10/19/2007	12:00	PRI	SRP	<0.5	<0.5	1.6	2.9	22
MW	PG-23UA	PG-23UA	10/19/2007	11:33	PRI	SRP	<0.5	<0.5	1	<0.5	4.2
MW	PG-24UA	PG-24UA	10/30/2007	10:06	PRI	SRP	<0.5	<0.5	0.8	<0.5	6.4
MW	PG-24UA	PT-PG-24UA	10/30/2007	10:08	PTS	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
MW	PG-25UA	PG-25UA	10/18/2007	11:20	PRI	SRP	<0.5	<0.5	1.2	1.2	6.5
MW	PG-28UA	PG-28UA	10/10/2007	13:48	PRI	SRP	<0.5	<0.5	2	<0.5	12
MW	PG-28UA	PT-PG-28UA	10/10/2007	13:50	PTS	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
MW	PG-29UA	PG-29UA	10/10/2007	12:35	PRI	SRP	<0.5	<0.5	<0.5	<0.5	2.3
MW	PG-2LA	PG-2LA	4/5/2007	10:00	PRI	SRP	<0.5	0.8	1.4	4.1	75
MW	PG-2LA	DUP "B"	4/5/2007	0:00	DUP	SRP	<0.5	0.8	1.3	4	75

TABLE 4. 2007 LABORATORY RESULTS FOR VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER MONITORING WELLS NORTH INDIAN BEND WASH AREA, SCOTTSDALE, ARIZONA

(results presented in µg/L)

Location Type	Sample Location	Field Sample ID	Sample Date	Sample Time	Sample Type	Lab	1,1,1-TCA	1,1-DCE	TCM	PCE	TCE
MW	PG-2LA	PG-2LA	10/4/2007	8:35	PRI	SRP	<0.5	0.8	1.3	4.6	85
MW	PG-2LA	DUP "B"	10/4/2007	0:00	DUP	SRP	<0.5	0.8	1.3	4.3	82
MW	PG-31UA	PG-31UA	10/24/2007	7:45	PRI	SRP	<0.5	<0.5	0.7	<0.5	43
MW	PG-31UA	DUP "M"	10/24/2007	0:00	DUP	SRP	<0.5	<0.5	0.7	<0.5	46
MW	PG-36UA	PG-36UA	10/31/2007	6:45	PRI	SRP	<0.5	1.2	2.3	3.2	8
MW	PG-36UA	DUP "Q"	10/31/2007	0:00	DUP	SRP	<0.5	1.2	2.2	3.1	7.8
MW	PG-38MA/LA	PG-38MA/LA	10/24/2007	9:58	PRI	SRP	<0.5	<0.5	0.7	49	5.1
MW	PG-39LA	PG-39LA	10/24/2007	8:25	PRI	SRP	<0.5	1.5	1.1	8.4	16
MW	PG-3UA	PG-3UA	10/19/2007	10:30	PRI	SRP	<0.5	<0.5	<0.5	<0.5	1
MW	PG-3UA	DUP "K"	10/19/2007	0:00	DUP	SRP	<0.5	<0.5	<0.5	<0.5	0.9
MW	PG-40LA	PG-40LA	2/7/2007	9:40	PRI	SRP	<0.5	<0.5	<0.5	<0.5	5.6
MW	PG-40LA	DUP F	2/7/2007	0:00	DUP	SRP	<0.5	<0.5	<0.5	<0.5	5.7
MW	PG-40LA	PG-40LA	4/12/2007	10:15	PRI	SRP	<0.5	<0.5	<0.5	<0.5	5.4
MW	PG-40LA	PT-PG-40LA	4/12/2007	10:17	PTS	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
MW	PG-40LA	PG-40LA	7/10/2007	10:00	PRI	SRP	<0.5	<0.5	<0.5	<0.5	6.2
MW	PG-40LA	DUP "E"	7/10/2007	0:00	DUP	SRP	<0.5	<0.5	<0.5	<0.5	6.2
MW	PG-40LA	PT-PG-40LA	7/10/2007	10:02	PTS	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
MW	PG-40LA	PG-40LA	10/9/2007	10:25	PRI	SRP	<0.5	<0.5	<0.5	<0.5	6.5
MW	PG-40LA	PT-PG-40LA	10/9/2007	10:30	PTS	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
MW	PG-42LA	PG-42LA	1/10/2007	10:16	PRI	SRP	<0.5	<0.5	0.5	<0.5	<0.5
MW	PG-42LA	PG-42LA	4/12/2007	10:45	PRI	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
MW	PG-42LA	PG-42LA	7/10/2007	10:30	PRI	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
MW	PG-42LA	PG-42LA	10/9/2007	11:00	PRI	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
MW	PG-43LA	PG-43LA	1/10/2007	8:40	PRI	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
MW	PG-43LA	PG-43LA	4/12/2007	7:45	PRI	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
MW	PG-43LA	PG-43LA	7/10/2007	7:35	PRI	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
MW	PG-43LA	PG-43LA	10/9/2007	8:15	PRI	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
MW	PG-43LA	DUP "D"	10/9/2007	0:00	DUP	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
MW	PG-44LA	PG-44LA	1/10/2007	11:00	PRI	SRP	<0.5	<0.5	0.5	<0.5	2.7
MW	PG-44LA	DUP "E"	1/10/2007	0:00	DUP	SRP	<0.5	<0.5	0.6	<0.5	2.7
MW	PG-44LA	PG-44LA	4/12/2007	11:15	PRI	SRP	<0.5	<0.5	0.5	<0.5	1.1
MW	PG-44LA	PG-44LA	7/10/2007	11:00	PRI	SRP	<0.5	<0.5	<0.5	<0.5	1
MW	PG-44LA	PG-44LA	10/9/2007	11:33	PRI	SRP	<0.5	<0.5	<0.5	<0.5	1.6
MW	PG-48MA	PG-48MA	1/5/2007	8:15	PRI	SRP	<0.5	0.6	2.9	1.7	54
MW	PG-48MA	DUP "D"	1/5/2007	0:00	DUP	SRP	<0.5	0.7	2.8	1.6	54
MW	PG-48MA	PG-48MA	4/13/2007	9:20	PRI	SRP	<0.5	0.6	3	1.8	56
MW	PG-48MA	PG-48MA	7/6/2007	8:50	PRI	SRP	<0.5	1.1	4.1	2.7	88
MW	PG-48MA	PG-48MA	10/25/2007	12:40	PRI	SRP	<0.5	1.1	4.5	3.1	91
MW	PG-49MA	PG-49MA	10/17/2007	9:25	PRI	SRP	<0.5	<0.5	<0.5	<0.5	2.2
MW	PG-4MA	PG-4MA	10/24/2007	10:41	PRI	SRP	<0.5	<0.5	0.9	2.4	8.9
MW	PG-4UA	PG-4UA	10/23/2007	13:40	PRI	SRP	<0.5	<0.5	1	25	7.4
MW	PG-4UA	PT-PG-4UA	10/23/2007	13:42	PTS	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
MW	PG-50MA	PG-50MA	10/12/2007	10:30	PRI	SRP	<0.5	<0.5	<0.5	<0.5	8.7
MW	PG-54MA	PG-54MA	10/12/2007	12:30	PRI	SRP	<0.5	<0.5	<0.5	<0.5	5.8
MW	PG-55MA	PG-55MA	10/12/2007	11:14	PRI	SRP	<0.5	<0.5	<0.5	<0.5	4.6
MW	PG-56MA	PG-56MA	10/12/2007	9:02	PRI	SRP	<0.5	<0.5	<0.5	<0.5	7.3
MW	PG-5MA	PG-5MA	10/17/2007	13:47	PRI	SRP	<0.5	<0.5	0.9	1.2	26
MW	PG-5MA	PT-PG-5MA	10/17/2007	13:50	PTS	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
MW	PG-5UA	PG-5UA	10/17/2007	13:30	PRI	SRP	<0.5	<0.5	0.9	0.6	7.1
MW	PG-6MA	PG-6MA	10/26/2007	10:49	PRI	SRP	<0.5	1.2	3	4.2	110
MW	PG-6UA	PG-6UA	10/18/2007	13:55	PRI	SRP	<0.5	<0.5	1.5	<0.5	1
MW	PG-6UA	PT-PG-6UA	10/18/2007	13:57	PTS	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
MW	PG-7MA	PG-7MA	10/30/2007	10:31	PRI	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
MW	PG-8UA	PG-8UA	10/23/2007	9:52	PRI	SRP	<0.5	<0.5	0.6	0.8	2.3
MW	S-1LA	S-1LA	10/10/2007	9:55	PRI	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
MW	S-1MA	S-1MA	10/10/2007	10:20	PRI	SRP	<0.5	<0.5	<0.5	4.3	<0.5
MW	S-2LA	S-2LA	1/3/2007	9:20	PRI	SRP	<0.5	<0.5	0.7	<0.5	2
MW	S-2LA	S-2LA	4/11/2007	7:45	PRI	SRP	<0.5	<0.5	0.5	<0.5	2.8
MW	S-2LA	S-2LA	7/2/2007	7:50	PRI	SRP	<0.5	<0.5	<0.5	<0.5	3.5
MW	S-2LA	S-2LA	10/10/2007	8:05	PRI	SRP	<0.5	<0.5	<0.5	<0.5	3.8
MW	S-2LA	DUP "E"	10/10/2007	0:00	DUP	SRP	<0.5	<0.5	<0.5	<0.5	3.6
MW	S-2MA	S-2MA	10/10/2007	8:45	PRI	SRP	<0.5	<0.5	0.8	<0.5	<0.5
MW	W-1MA	W-1MA	2/7/2007	11:25	PRI	SRP	<0.5	<0.5	<0.5	1.4	170
MW	W-1MA	W-1MA	4/6/2007	9:45	PRI	SRP	<0.5	<0.5	<0.5	<0.5	69
MW	W-1MA	W-1MA	7/3/2007	9:30	PRI	SRP	<0.5	<0.5	<0.5	1.1	200
MW	W-1MA	W-1MA	10/4/2007	13:35	PRI	SRP	<0.5	<0.5	<0.5	<0.5	75
MW	W-1MA	PT-W-1MA	10/4/2007	13:38	PTS	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
MW	W-2MA	W-2MA	1/3/2007	13:55	PRI	SRP	<0.5	1	1.4	15	4300
MW	W-2MA	W-2MA	4/6/2007	12:45	PRI	SRP	<0.5	<0.5	1.3	15	4200
MW	W-2MA	PT-W-2MA	4/6/2007	12:48	PTS	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
MW	W-2MA	W-2MA	7/3/2007	8:55	PRI	SRP	<0.5	<0.5	1.3	18	4300

TABLE 4. 2007 LABORATORY RESULTS FOR VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER MONITORING WELLS NORTH INDIAN BEND WASH AREA, SCOTTSDALE, ARIZONA
(results presented in µg/L)

Location Type	Sample Location	Field Sample ID	Sample Date	Sample Time	Sample Type	Lab	1,1,1-TCA	1,1-DCE	TCM	PCE	TCE
MW	W-2MA	W-2MA	10/11/2007	13:58	PRI	SRP	<0.5	**0.9**	**1.2**	**16**	**4100**
MW	W-2MA	PT-W-2MA	10/11/2007	14:00	PTS	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
MW	W-3UA	W-3UA	10/16/2007	8:40	PRI	SRP	<0.5	<0.5	**9.8**	<0.5	<0.5
Trip/Field Blanks											
	Trip Blank	FRB	1/2/2007	4:40	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	1/3/2007	6:05	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	1/4/2007	5:31	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	1/5/2007	5:30	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	1/10/2007	6:01	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	2/5/2007	5:15	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	2/7/2007	6:30	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	3/5/2007	5:10	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	4/2/2007	6:05	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	4/5/2007	8:00	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	4/6/2007	6:00	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	4/11/2007	5:30	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	4/12/2007	5:45	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	4/13/2007	5:45	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	5/9/2007	5:20	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	6/4/2007	5:25	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	7/2/2007	6:43	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	7/3/2007	6:00	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	7/5/2007	11:00	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	7/6/2007	5:10	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	7/10/2007	6:00	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	7/11/2007	5:30	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	7/13/2007	5:45	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	8/6/2007	5:40	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	9/4/2007	6:00	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	10/1/2007	5:30	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	10/4/2007	6:00	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	10/5/2007	6:00	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	10/9/2007	6:25	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	10/10/2007	5:35	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	10/11/2007	6:00	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	10/12/2007	6:00	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	10/16/2007	6:00	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	10/17/2007	6:00	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	10/18/2007	5:20	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	10/19/2007	6:00	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	10/23/2007	6:00	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	10/23/2007	10:05	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	10/24/2007	6:00	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	10/25/2007	6:00	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	10/26/2007	6:00	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	10/30/2007	6:00	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	10/31/2007	5:30	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	11/5/2007	4:55	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	12/3/2007	5:05	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5

Note:

<# = Below detection limit
PRI = Primary
DUP = Duplicate
PTS = Post Treatment Sample
TRA = Travel or Trip Blank
MW = Montoring Well
SRP = Salt River Project Laboratories

1,1,1-TCA = 1,1,1-Trichloroethane
1,1-DCE = 1,1-Dichloroethene
TCM = Chloroform
PCE = Tetrachloroethene
TCE = Trichloroethene

TABLE 5. 2007 LABORATORY RESULTS FOR VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER EXTRACTION WELLS NORTH INDIAN BEND WASH AREA, SCOTTSDALE, ARIZONA

(results presented in µg/L)

Location Type	Sample Location	Field Sample ID	Sample Date	Sample Time	Sample Type	Lab	1,1,1-TCA	1,1-DCE	TCM	PCE	TCE
EX	7EX-1UA	7EX-1UA	1/2/2007	9:25	PRI	SRP	<0.5	<0.5	<0.5	1.2	9.1
EX	7EX-1UA	7EX-1UA	4/2/2007	8:05	PRI	SRP	<0.5	<0.5	<0.5	1.2	8.5
EX	7EX-1UA	Duplicate "A"	4/2/2007	0:00	DUP	SRP	<0.5	<0.5	<0.5	1.2	8.2
EX	7EX-1UA	7EX-1UA	7/2/2007	9:25	PRI	SRP	<0.5	<0.5	<0.5	0.8	7.2
EX	7EX-1UA	Duplicate "A"	7/2/2007	0:00	DUP	SRP	<0.5	<0.5	<0.5	0.8	7.3
EX	7EX-1UA	7EX-1UA	10/1/2007	8:30	PRI	SRP	<0.5	<0.5	<0.5	0.7	6
EX	7EX-1UA	Duplicate "A"	10/1/2007	0:00	DUP	SRP	<0.5	<0.5	<0.5	0.7	5.9
EX	7EX-3aMA	7EX-3aMA	1/2/2007	9:27	PRI	SRP	<0.5	<0.5	0.6	3.5	570
EX	7EX-3aMA	7EX-3aMA	4/2/2007	8:10	PRI	SRP	<0.5	<0.5	0.5	3.7	610
EX	7EX-3aMA	7EX-3aMA	7/2/2007	9:28	PRI	SRP	<0.5	<0.5	<0.5	3.5	620
EX	7EX-3aMA	7EX-3aMA	10/1/2007	8:40	PRI	SRP	<0.5	<0.5	<0.5	3.4	580
EX	7EX-4MA	7EX-4MA	1/2/2007	9:40	PRI	SRP	<0.5	0.5	0.8	7.1	1600
EX	7EX-4MA	7EX-4MA	4/12/2007	6:00	PRI	SRP	<0.5	<0.5	0.7	6.9	1400
EX	7EX-4MA	7EX-4MA	7/2/2007	8:59	PRI	SRP	<0.5	<0.5	0.6	6.3	1400
EX	7EX-4MA	7EX-4MA	10/1/2007	8:55	PRI	SRP	<0.5	<0.5	0.7	7.4	1400
EX	7EX-5MA	7EX-5MA	1/2/2007	9:50	PRI	SRP	<0.5	<0.5	0.7	2.8	450
EX	7EX-5MA	7EX-5MA	4/2/2007	8:30	PRI	SRP	<0.5	<0.5	<0.5	3.8	630
EX	7EX-5MA	7EX-5MA	7/2/2007	9:09	PRI	SRP	<0.5	<0.5	0.6	3.2	530
EX	7EX-5MA	7EX-5MA	10/1/2007	9:08	PRI	SRP	<0.5	<0.5	0.7	3.1	540
EX	AAWC-14	AAWC-14	6/4/2007	7:39	PRI	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
EX	AAWC-14	Duplicate "A"	6/4/2007	0:00	DUP	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
EX	AAWC-14	AAWC-14	7/2/2007	8:11	PRI	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
EX	AAWC-14	AAWC-14	8/6/2007	7:20	PRI	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
EX	AAWC-14	Duplicate "A"	8/6/2007	0:00	DUP	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
EX	AAWC-14	AAWC-14	9/4/2007	8:21	PRI	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
EX	AAWC-14	AAWC-14	10/1/2007	7:43	PRI	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
EX	AAWC-14	AAWC-14	11/5/2007	8:15	PRI	SRP	<0.5	<0.5	<0.5	<0.5	0.9
EX	AAWC-14	AAWC-14	12/3/2007	7:58	PRI	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
EX	AAWC-15	AAWC-15	1/2/2007	8:33	PRI	SRP	<0.5	<0.5	<0.5	<0.5	2.6
EX	AAWC-15	Duplicate "A"	1/2/2007	0:00	DUP	SRP	<0.5	<0.5	<0.5	<0.5	2.7
EX	AAWC-15	AAWC-15	2/5/2007	9:00	PRI	SRP	<0.5	<0.5	<0.5	<0.5	2.4
EX	AAWC-15	Duplicate "A"	2/5/2007	0:00	DUP	SRP	<0.5	<0.5	<0.5	<0.5	2.5
EX	AAWC-15	AAWC-15	3/5/2007	7:05	PRI	SRP	<0.5	<0.5	<0.5	<0.5	2.4
EX	AAWC-15	AAWC-15	4/2/2007	7:30	PRI	SRP	<0.5	<0.5	<0.5	<0.5	2.1
EX	AAWC-15	AAWC-15	5/9/2007	6:40	PRI	SRP	<0.5	<0.5	<0.5	<0.5	3.1
EX	AAWC-15	Duplicate "A"	5/9/2007	0:00	DUP	SRP	<0.5	<0.5	<0.5	<0.5	2.9
EX	COS-31	COS-31	9/4/2007	7:46	PRI	SRP	<0.5	<0.5	1.0	0.7	15
EX	COS-31	COS-31	10/1/2007	6:55	PRI	SRP	<0.5	<0.5	1	0.7	14
EX	COS-31	COS-31	11/5/2007	7:37	PRI	SRP	<0.5	<0.5	0.7	<0.5	12
EX	COS-31	Duplicate "A"	11/5/2007	0:00	DUP	SRP	<0.5	<0.5	0.6	<0.5	12
EX	COS-71	COS-71	1/2/2007	7:52	PRI	SRP	<0.5	1.2	1.3	7.3	94
EX	COS-71	COS-71	7/2/2007	7:35	PRI	SRP	<0.5	1	1	5.6	92
EX	COS-71	COS-71	8/6/2007	6:35	PRI	SRP	<0.5	1.2	1.2	5.7	92
EX	COS-71	COS-71	9/4/2007	7:22	PRI	SRP	<0.5	1.4	1.4	7.1	89
EX	COS-71	COS-71	10/1/2007	7:10	PRI	SRP	<0.5	1.2	1.2	6.5	83
EX	COS-71	COS-71	11/5/2007	7:15	PRI	SRP	<0.5	1.3	1.3	6.3	78
EX	COS-71	COS-71	12/3/2007	7:15	PRI	SRP	<0.5	1.2	1.2	5.6	74
EX	COS-72	COS-72	9/4/2007	7:35	PRI	SRP	<0.5	0.6	1.0	4.6	26
EX	COS-72	Duplicate "A"	9/4/2007	0:00	DUP	SRP	<0.5	0.6	1.0	4.4	26
EX	COS-72	COS-72	10/1/2007	7:18	PRI	SRP	<0.5	0.5	0.9	4.6	28
EX	COS-72	COS-72	11/5/2007	7:25	PRI	SRP	<0.5	0.7	1.2	4.8	30
EX	COS-72	COS-72	12/3/2007	7:25	PRI	SRP	<0.5	0.8	1.2	4.3	29
EX	COS-75A	COS-75A	1/2/2007	8:13	PRI	SRP	<0.5	3.1	4.3	13	160
EX	COS-75A	COS-75A	7/2/2007	7:54	PRI	SRP	<0.5	3.1	4.4	12	140
EX	COS-75A	COS-75A	8/6/2007	6:58	PRI	SRP	<0.5	3.6	5.1	14	150
EX	COS-75A	COS-75A	9/4/2007	8:10	PRI	SRP	<0.5	3.5	5.0	14	150
EX	COS-75A	COS-75A	10/1/2007	7:30	PRI	SRP	<0.5	3.1	4.4	13	140
EX	COS-75A	COS-75A	11/5/2007	8:00	PRI	SRP	<0.5	3.1	4.4	12	140
EX	COS-75A	COS-75A	12/3/2007	7:45	PRI	SRP	<0.5	3.1	4.2	13	130
EX	COS-75A	Duplicate "A"	12/3/2007	0:00	DUP	SRP	<0.5	2.9	4.1	12	130
EX	MEX-1	MEX-1-1A-022707	2/27/2007	14:35	PRI	TGI	<0.5	2.8	2.0	6.9	63 D2
EX	MEX-1	MEX-1-1B-022707	2/27/2007	14:40	DUP	TGI	<0.5	2.9	2.0	6.7	60 D2
EX	MEX-1	MEX-1-1A-030607	3/6/2007	14:00	PRI	TGI	<0.5	2.4	2.1	6.3	65 D2
EX	MEX-1	MEX-1	4/6/2007	6:40	PRI	SRP	<0.5	1.5	1.4	3.2	38
EX	MEX-1	MEX-1-1A-041607	4/16/2007	8:45	PRI	TGI	<0.5	2.2	2.4	4.2	59 D2
EX	MEX-1	MEX-1-1A-050107	5/2/2007	15:00	PRI	TGI	<0.5	1.9	2.3	3.9	57 D2
EX	MEX-1	MEX-1-1B-050107	5/2/2007	15:05	DUP	TGI	<0.5	2.0	2.3	3.9	57 D2
EX	MEX-1	MEX-1-1A-060407	6/4/2007	15:10	PRI	TGI	<1.0 D1	1.6 D1	2.2 D1	3.4 D1	61 D2
EX	MEX-1	MEX-1-1A-082707	8/27/2007	15:15	PRI	TGI	<0.5	2.9	2.7	5.9	71 D2
EX	MEX-1	MEX-1-1A-091007	9/10/2007	15:35	PRI	TGI	<0.5	2.2	2.7	4.4	60 D2
EX	MEX-1	MEX-1-1B-091007	9/10/2007	15:35	DUP	TGI	<0.5	2.2	2.7	4.4	62 D2
EX	MEX-1	MEX-1	10/25/2007	8:35	PRI	SRP	<0.5	1.6	1.7	2.8	46
EX	MEX-1	MEX-1-1A-110507	11/5/2007	13:45	PRI	TGI	<0.5	2.3	2.6	4.2	66 D2
EX	MEX-1	MEX-1-1A-121807	12/18/2007	12:30	PRI	TGI	<0.5	3.7	2.4	6.6	65 D2
EX	MEX-1	MEX-1-1B-121807	12/18/2007	12:35	DUP	TGI	<0.5	3.2	2.2	6.1	63 D2

TABLE 5. 2007 LABORATORY RESULTS FOR VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER EXTRACTION WELLS NORTH INDIAN BEND WASH AREA, SCOTTSDALE, ARIZONA
(results presented in µg/L)

Location Type	Sample Location	Field Sample ID	Sample Date	Sample Time	Sample Type	Lab	1,1,1-TCA	1,1-DCE	TCM	PCE	TCE
EX	PCX-1	PCX-1	1/2/2007	8:42	PRI	SRP	<0.5	**0.5**	**1.4**	**2.3**	**70**
EX	PCX-1	PCX-1	2/5/2007	9:09	PRI	SRP	<0.5	**0.5**	**1.3**	**2.2**	**67**
EX	PCX-1	PCX-1	3/5/2007	7:20	PRI	SRP	<0.5	**0.6**	**1.3**	**2.3**	**67**
EX	PCX-1	Duplicate "A"	3/5/2007	0:00	DUP	SRP	<0.5	**0.6**	**1.3**	**2.2**	**69**
EX	PCX-1	PCX-1	4/12/2007	8:10	PRI	SRP	<0.5	**0.6**	**1.3**	**2.2**	**64**
EX	PCX-1	PCX-1	5/9/2007	6:55	PRI	SRP	<0.5	**0.7**	**1.1**	**2.1**	**61**
EX	PCX-1	PCX-1	6/4/2007	7:17	PRI	SRP	<0.5	**0.5**	**1.1**	**2.3**	**64**
EX	PCX-1	PCX-1	7/2/2007	8:40	PRI	SRP	<0.5	**0.6**	**1.2**	**2.3**	**63**
EX	PCX-1	PCX-1	8/6/2007	7:35	PRI	SRP	<0.5	**0.7**	**1.4**	**2.5**	**65**
EX	PCX-1	PCX-1	9/4/2007	8:35	PRI	SRP	<0.5	**0.6**	**1.3**	**2.4**	**68**
EX	PCX-1	PCX-1	10/1/2007	7:57	PRI	SRP	<0.5	<0.5	**1.2**	**2.2**	**63**
EX	PCX-1	PCX-1	11/5/2007	8:30	PRI	SRP	<0.5	**0.7**	**1.3**	**2.4**	**68**
EX	PCX-1	PCX-1 Influent	12/12/2007	15:35	PRI	TGI	<0.5	**0.6**	**1.2**	**3.3**	**71 D2**
EX	SRP 23.6E-06.0N	SRP 23.6E-06.0N	4/2/2007	9:00	PRI	SRP	<0.5	**1.4**	**6**	**3.4**	**130**
EX	SRP 23.6E-06.0N	GR-1-1A-040407	4/4/2007	13:45	PRI	TGI	<0.5	**1.7**	**6.7**	**4.1**	**150 D2**
EX	SRP 23.6E-06.0N	GR-1-1B-040407	4/4/2007	13:50	DUP	TGI	<0.5	**1.7**	**6.7**	**4.0**	**120 D2**
EX	SRP 23.6E-06.0N	SRP 23.6E-06.0N	7/2/2007	9:49	PRI	SRP	<0.5	**1.1**	**4.9**	**2.5**	**110**
EX	SRP 23.6E-06.0N	GR-1-1A-070207	7/2/2007	15:25	PRI	TGI	<0.5	**1.2**	**6.0**	**3.2**	**120 D2**
EX	SRP 23.6E-06.0N	GR-1-1B-070207	7/2/2007	15:30	DUP	TGI	<0.5	**1.2**	**6.0**	**3.2**	**120 D2**
EX	SRP 23.6E-06.0N	SRP 23.6E-06.0N	10/1/2007	9:33	PRI	SRP	<0.5	**0.9**	**4.9**	**2.6**	**100**
EX	SRP 23.6E-06.0N	GR-1-1A-100107	10/1/2007	10:00	PRI	CAS	<0.5	**1.2**	**5.1**	**2.7**	**110**

TABLE 5. 2007 LABORATORY RESULTS FOR VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER EXTRACTION WELLS NORTH INDIAN BEND WASH AREA, SCOTTSDALE, ARIZONA
(results presented in µg/L)

Location Type	Sample Location	Field Sample ID	Sample Date	Sample Time	Sample Type	Lab	1,1,1-TCA	1,1-DCE	TCM	PCE	TCE
Trip/Field Blanks											
	Trip Blank	FRB	1/2/2007	4:40	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	1/3/2007	6:05	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	1/4/2007	5:31	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	1/5/2007	5:30	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	1/10/2007	6:01	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	2/5/2007	5:15	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	2/7/2007	6:30	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	3/5/2007	5:10	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	4/2/2007	6:05	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	4/5/2007	8:00	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	4/6/2007	6:00	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	4/11/2007	5:30	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	4/12/2007	5:45	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	4/13/2007	5:45	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	5/9/2007	5:20	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	6/4/2007	5:25	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	7/2/2007	6:43	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	7/3/2007	6:00	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	7/5/2007	11:00	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	7/6/2007	5:10	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	7/10/2007	6:00	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	7/11/2007	5:30	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	7/13/2007	5:45	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	8/6/2007	5:40	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	9/4/2007	6:00	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	10/1/2007	5:30	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	10/4/2007	6:00	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	10/5/2007	6:00	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	10/9/2007	6:25	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	10/10/2007	5:35	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	10/11/2007	6:00	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	10/12/2007	6:00	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	10/16/2007	6:00	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	10/17/2007	6:00	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	10/18/2007	5:20	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	10/19/2007	6:00	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	10/23/2007	6:00	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	10/23/2007	10:05	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	10/24/2007	6:00	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	10/25/2007	6:00	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	10/26/2007	6:00	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	10/30/2007	6:00	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	10/31/2007	5:30	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	11/5/2007	4:55	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip Blank	FRB	12/3/2007	5:05	TRA	SRP	<0.5	<0.5	<0.5	<0.5	<0.5

Note:

<# = Below detection limit
PRI = Primary
DUP = Duplicate
PTS = Post Treatment Sample
TRA = Travel or Trip Blank
EX = Extraction Well
CAS = Columbia Analytical Services
SRP = Salt River Project Laboratories
TGI = Transwest Geochem, Inc.
D1 = Sample required dilution due to matrix.
D2 = Sample required dilution due to high concentration of target analyte.

1,1,1-TCA = 1,1,1-Trichloroethane
1,1-DCE = 1,1-Dichloroethene
TCM = Chloroform
PCE = Tetrachloroethene
TCE = Trichloroethene

TABLE 6. SUMMARY OF 2007 MONTHLY GROUNDWATER PRODUCTION
NORTH INDIAN BEND WASH AREA, SCOTTSDALE, ARIZONA

Production Well ID	Gallons (x1000)													Total In Acre-Feet
	Jan	Feb	March	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total	
7EX-3MA	4,290	5,448	6,348	6,394	5,998	6,770	6,852	6,650	6,693	6,297	5,852	6,429	74,021	227.2
7EX-4MA	991	1,133	1,165	1,177	1,132	966	1,271	1,310	1,294	1,039	1,141	171	12,790	39.3
7EX-5MA	6,980	9,404	9,928	9,291	8,322	9,100	9,094	8,699	8,872	9,000	8,799	5,747	103,236	316.8
AAWC 11	920	0	21,990	38,590	19,230	47,800	35,270	6,330	23,090	16,000	9,970	18,590	237,780	729.7
AAWC 12	2,020	330	13,890	26,650	29,940	11,170	750	1,230	29,610	20,710	10,880	30,290	177,470	544.6
AAWC 14	0	0	0	0	27,240	105,390	108,880	100,320	98,630	94,700	71,630	26,010	632,800	1,942.0
AAWC 15	84,570	82,400	53,960	4,180	55,910	N.I.S.	N.I.S.	N.I.S.	N.I.S.	N.I.S.	N.I.S.	N.I.S.	281,020	862.4
AAWC 16	0	4,310	19,400	36,260	48,680	54,370	79,120	83,440	90,860	87,070	58,840	5,350	567,700	1,742.2
AAWC 17	2,380	1,380	15,730	29,870	51,590	86,560	91,690	72,410	1,500	26,780	38,880	33,280	452,050	1,387.3
AVI	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AWC 7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AWC 8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AWC 8A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AWC 9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AWC 12A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COS 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
COS 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
COS 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
COS 14	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
COS 25 *	356	329	605	1,413	2,113	2,889	2,425	2,171	2,311	731	319	64	15,727	48.3
COS 69	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
COS 70	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
COS 71	67,571	0	0	0	0	19,511	61,313	63,393	68,730	71,645	68,630	72,187	492,981	1,512.9
COS 72	30,689	0	0	0	0	0	0	64,979	89,224	94,028	88,201	93,727	460,848	1,414.3
COS 73	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
COS 74	42,532	4,751	9,909	6,179	23,896	92,956	73,956	29,692	2,937	34,323	4,604	206	325,942	1,000.3
COS 75A	82,897	1,090	0	0	0	20,392	70,797	71,345	76,041	79,910	77,310	80,352	560,133	1,719.0
COS 76	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
COS 77	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
COS 78	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
COT 6	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
IBGC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LIARD 2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MDWC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MEX-1MA	N.I.S.	2,700	33,690	43,380	51,030	8,050	-	18,200	49,950	55,820	56,930	13,000	332,750	1,021.2
QRIA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SRIR SCC	2,297	2,186	1,398	3,475	8,183	10,882	10,928	2,173	9,363	2,914	5,623	1,851	61,273	188.0
SRIR 4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SRIR 10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 6. SUMMARY OF 2007 MONTHLY GROUNDWATER PRODUCTION NORTH INDIAN BEND WASH AREA, SCOTTSDALE, ARIZONA

Production Well ID	Gallons (x1000)													Total In Acre-Feet
	Jan	Feb	March	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total	
SRP 21.5E,8N	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
SRP 22.1E,8.5N	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
SRP 22.3E,7N	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
22.4E,9N	---	---	---	---	---	---	---	---	---	---	---	---	0	0.0
SRP 22.5E,5.5N	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
SRP 22.5E,6N	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
SRP 22.5E,9.3N (PCX 1)	89,190	80,360	90,050	90,790	90,090	63,370	86,490	87,900	89,390	97,510	61,750	56,590	983,480	3,018.2
SRP 22.6E,10N	987	0	20,548	117,681	92,414	25,713	0	9,880	11,408	6,996	3,829	0	289,456	888.3
SRP 23E,10.8N	1,359	11,092	7,814	41,334	35,312	10,659	0	0	6,973	4,138	1,414	0	120,095	368.6
SRP 23.3E,7.3N (COS 31)	11,522	---	---	---	---	---	---	77,756	104,520	33,030	82,621	---	309,449	949.7
SRP 23.3E,7.5N (COS 6)	0	0	25,172	61,041	75,591	13,327	0	0	0	0	0	0	175,131	537.5
SRP 23.4E,10.6N	0	0	0	0	---	---	---	---	---	---	---	---	0	0.0
SRP 23.5E,5.3N	0	661	38,887	31,946	0	0	0	3,056	4,067	0	0	52	78,670	241.4
SRP 23.5E,8.8N	0	443	20,421	46,698	57,249	9,766	0	0	0	0	0	0	134,576	413.0
SRP 23.5E,9.5N	0	554	29,196	63,834	58,099	8,993	0	0	0	0	0	2,802	163,479	501.7
SRP 23.6E,6N (Granite Reef)	N.I.S.	N.I.S.	12,460	5,940	---	19,400	763	---	5,950	4,900	---	---	49,413	151.6
SRP 24E,10.5N	2,620	16,869	18,020	58,539	54,573	16,315	0	4,591	0	14,054	0	3,171	188,752	579.3
Total Monthly Discharge (Gallons x 1,000)	**434,172**	**225,441**	**450,581**	**724,662**	**796,593**	**644,349**	**639,599**	**715,526**	**781,413**	**761,595**	**657,223**	**449,869**	**7,281,022**	
Total Monthly Discharge (Acre-Feet)	**1,332**	**692**	**1,383**	**2,224**	**2,445**	**1,977**	**1,963**	**2,196**	**2,398**	**2,337**	**2,017**	**1,381**		**22,345**

Abbreviations:

7EX = Area 7 Extraction Wells
AAWC = Arizona-American Water Company
AVI = Arcadia Vista Improvement
AWC = Arcadia Water Company
COS = City of Scottsdale
COT = City of Tempe
IBGC = Indian Bend (Rio Salado) Golf Course
LAIRD = Tempe School District No. 3
MDWC = McDowell Water Company
MEX = Motorola Extraction Well
NA = Not Available
N.I.S. = Not in Service
QRIA = Quail Run Irrigation Association
SRIR = Salt River Indian Reservation
SRP = Salt River Project
SCC = Scottsdale Community College
--- = No Data

Notes:

* All water from Well 25 goes directly to McKellips Park irrigation and does not go to City of Scottsdale's water delivery system.

TABLE 7. SUMMARY OF ANNUAL GROUNDWATER PRODUCTION FROM 1991 THROUGH 2007 NORTH INDIAN BEND WASH AREA, SCOTTSDALE, ARIZONA

Production Well ID	Gallons (x1000)																
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
7EX-3MA (1)	---	---	---	---	---	---	---	---	13,170	87,374	76,403	64,048	77,689	83,654	72,477	73,094	74,021
7EX-4MA (1)	---	---	---	---	---	---	---	---	12,498	57,647	50,957	29,734	35,822	27,687	19,075	22,204	12,790
7EX-5MA (2)	---	---	---	---	---	---	---	---	---	---	---	42,094	96,278	85,913	102,190	95,532	103,236
AAWC 11 (3)	---	---	---	---	---	---	---	---	---	---	---	---	272,550	317,470	234,740	388,570	237,780
AAWC 12 (3)	---	---	---	---	---	---	---	---	---	---	---	---	256,100	182,030	190,290	235,690	177,470
AAWC 14 (4)	---	---	---	---	---	---	203,055	584,634	575,455	512,210	487,780	593,520	632,010	677,340	771,890	387,500	632,800
AAWC 15	607,770	653,870	616,680	404,350	204,540	289,070	629,292	950,088	1,066,523	996,540	811,430	913,460	1,017,490	1,082,600	1,059,240	1,066,790	281,020
AAWC 16 (3)	---	---	---	---	---	---	---	---	---	---	---	---	414,570	319,870	341,430	246,220	567,700
AAWC 17 (3)	---	---	---	---	---	---	---	---	---	---	---	---	128,340	102,833	38,140	173,640	452,050
AVI	74,590	79,207	17,595	96,339	72,417	39,227	93,095	79,881	84,354	75,739	79,388	76,052	70,536	78,500	68,608	62,647	NA
AWC 7	77,329	337,391	401,397	424,219	387,121	340,693	190,891	223,939	298,584	305,173	276,139	220,293	229,398	170,814	176,533	45,048	NA
AWC 8	363,054	418,922	404,031	417,253	240,649	340,509	270,556	370,565	319,653	292,496	138,796	279,500	212,213	321,431	293,884	254,674	NA
AWC 8A	0	0	0	215,529	251,691	265,624	271,981	266,445	271,890	184,595	136,052	226,062	257,184	245,349	156,651	195,585	NA
AWC 9	434,554	131,541	100,701	136,885	202,215	226,038	236,429	180,339	166,739	214,812	323,118	213,269	168,569	159,195	133,704	278,128	NA
AWC 12A	0	0	0	0	329,054	241,350	331,891	272,151	232,163	309,620	329,925	295,894	321,100	312,605	370,418	406,088	NA
COS 2	262,040	366,760	204,638	14,120	0	0	0	0	0	0	0	0	0	0	0	0	0
COS 3	226,923	224,340	371,860	410,088	406,191	322,975	386,620	363,730	260,750	91,100	156,910	142,950	129,912	95,897	162,642	2,059	0
COS 4 (3)	---	---	---	---	---	---	---	---	---	---	---	---	347,168	308,158	445,982	17,764	0
COS 14 (3)	---	---	---	---	---	---	---	---	---	---	---	---	0	0	0	0	0
COS 25	260,148	198,980	83,510	484,560	522,689	242,260	25,617	8,730	0	0	6,481	15,629	14,630	15,460	9,443	25,370	15,727
COS 69	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COS 70	133,670	2,530	43,100	390,090	110,770	55,230	93,120	2,711	0	0	0	0	0	0	0	0	0
COS 71	0	0	6,480	502,616	234,890	1,126,820	958,760	947,553	632,400	788,420	1,014,176	432,284	765,243	639,383	388,004	826,612	492,981
COS 72	0	0	4,990	394,624	299,620	699,790	662,880	779,564	953,930	763,910	556,695	812,383	561,121	1,028,700	1,016,884	928,304	460,848
COS 73	3,270	649,250	1,007,030	3,200	800	9,740	3,130	521	180	220	190	0	0	0	0	0	0
COS 74	42,760	38,040	635,470	733,980	825,023	460,991	396,916	790,900	918,170	1,093,461	1,166,630	1,003,434	956,413	1,098,277	1,172,058	424,741	325,942
COS 75A	0	0	5,270	367,020	452,560	812,540	892,870	951,517	830,740	896,410	979,502	836,010	933,509	926,309	936,469	929,491	560,133
COS 76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COS 77	180	3,040	480	110	0	0	0	0	0	0	0	0	0	0	0	0	0
COS 78	999,340	310	900	730	160	0	3,100	220	0	0	0	0	0	0	0	0	0
COT 6	0	840	860	0	3,400	349,295	4,200	0	0	446,787	734,806	221,231	26,849	0	22,585	391	0
IBGC	62,212	58,959	11,990	66,749	53,289	69,829	75,790	68,933	343	28,383	65,041	70,029	62,896	65,980	59,126	63,818	NA
LAIRD 2	0	3,360	2,836	0	8,933	894	4,654	1,575	8,436	9,866	0	0	0	0	0	NA	NA
MDWC	25,906	27,757	34,814	145,294	150,774	147,025	62,105	60,425	67,519	72,472	59,486	53,209	51,867	45,982	1,352	50,079	NA
MEX-1MA (5)	---	---	---	---	---	---	---	---	34,348	256,585	361,411	227,276	119,380	315,710	309,920	311,980	332,750
QRIA	9,630	0	82	4,805	2,116	0	0	16,542	19,830	0	16,437	5,081	14,628	13,539	12,886	3,553	NA
SRIR SCC	0	80,622	62,103	91,759	41,294	77,805	77,857	36,377	69,626	78,220	76,351	76,149	65,411	68,044	76,317	82,781	61,273
SRIR 4	60,569	7,768	0	31,623	3	0	248	38	0	0	0	0	0	0	0	0	NA
SRIR 10	47,570	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA

TABLE 7. SUMMARY OF ANNUAL GROUNDWATER PRODUCTION FROM 1991 THROUGH 2007 NORTH INDIAN BEND WASH AREA, SCOTTSDALE, ARIZONA

Production Well ID	Gallons (x1000)																
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
SRP 21.5E,8N	73,329	1,958	2,289	53,774	17,598	19,467	0	1,300	213,318	454,441	247,363	160,469	166,326	254,060	28,799	0	0
SRP 22.1E,8.5N	155,780	315	3,617	81,801	3,259	22,642	23	1,055	7	488,287	214,764	3,128	0	7,302	0	0	0
SRP 22.3E,7N	0	0	0	0	652	1,307	0	3	0	0	0	0	0	0	0	0	0
SRP 22.4E,9N	0	1,630	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SRP 22.5E,5.5N	0	0	0	0	0	0	0	0	0	0	123,758	264,558	0	0	3	0	0
SRP 22.5E,6N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SRP 22.5E,9.3N (PCX 1) (6)	---	---	---	---	---	---	744,310	1,169,489	928,957	1,094,150	709,460	1,080,880	1,032,520	1,002,260	1,003,410	1,109,260	983,480
SRP 22.6E,10N (3)	---	---	---	---	---	---	---	---	---	---	---	---	935,913	828,615	98,003	103,308	289,456
SRP 23E,10.8N (3)	---	---	---	---	---	---	---	---	---	---	---	---	447,265	174,919	14,321	21,004	120,095
SRP 23.3E,7.3N (COS 31)	0	1,304	21,832	1,006,984	15,970	1,222,118	974,585	493,535	917,420	748,630	983,963	1,092,080	1,019,979	517,254	827,369	561,001	309,449
SRP 23.3E,7.5N (COS 6)	156,759	24,121	0	35,523	47,907	192,143	168,259	246,937	101,319	62,195	102,252	80,341	138,383	88,935	1,639	1,776	175,131
SRP 23.4E,10.6N (3)	---	---	---	---	---	---	---	---	---	---	---	---	470,573	577,062	30,021	0	0
SRP 23.5E,5.3N	130,686	3,259	4,236	3,259	5,215	3,201	0	34,498	111,445	144,215	126,689	226,059	128,635	255,258	3,350	0	78,670
SRP 23.5E,8.8N	63,877	5	2	326	7,170	0	49	691	1,499	132,276	70,906	21,051	213,022	241,944	1,502	2,920	134,576
SRP 23.5E,9.5N	0	0	0	0	0	0	0	88	502	117,593	131	99,547	30,043	256,542	2,053	1,988	163,479
SRP 23.6E,6N (Granite Reef)	0	0	0	0	0	0	0	0	104,440	287,658	174,198	319,109	180,870	42,940	58,780	173,700	44,518
SRP 24E,10.5N (3)	---	---	---	---	---	---	---	---	---	---	---	---	528,529	428,179	31,259	45,701	188,752
Total Discharge (Gallons x1000)	4,271,946	3,316,079	4,048,793	6,517,610	4,897,970	7,578,583	7,762,283	8,904,974	9,216,207	11,091,483	10,657,588	10,196,812	13,530,934	13,464,000	10,743,445	9,619,010	0
Total Discharge (Acre-Feet)	13,110	10,177	12,425	20,002	15,031	23,258	23,822	27,328	28,283	34,038	32,707	31,293	41,525	41,319	32,970	29,520	0

Abbreviations:

7EX = Area 7 Extraction Wells
AAWC = Arizona-American Water Company
AVI = Arcadia Vista Improvement
AWC = Arcadia Water Company
COS = City of Scottsdale
COT = City of Tempe
IBGC = Indian Bend (Rio Salado) Golf Course
LAIRD = Tempe School District No. 3
MDWC = McDowell Water Company
MEX = Motorola Extraction Well
NA = Not available
QRIA = Quail Run Irrigation Association
SRIR = Salt River Indian Reservation
SRP = Salt River Project

Notes:

(1) Extraction wells 7EX-3MA and 7EX-4MA went into service in September 1999.
(2) Extraction well 7EX-5MA went into service in February 2002.
(3) Historical discharge data from 1991 through 2002 not collected for these wells.
(4) Well AAWC 14 was added to the semi-annual reports in April 1997.
(5) Well MEX-1MA was added to the semi-annual reports in October 1999.
(6) Well 22.5E,9.3N (PCX-1) went into service in April 1997.

TABLE 8. SUMMARY OF 2007 NIBW EXTRACTION WELL PUMPAGE AND
ESTIMATED TCE MASS REMOVED,
NORTH INDIAN BEND WASH AREA, SCOTTSDALE, ARIZONA

		Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07	Total	Daily Average	Pumpage
Central Groundwater Treatment Facility:																(Gallons per Minute)
COS-31	pumpage	11,522	-	-	-	-	-	-	77,756	104,520	33,030	82,621	-	309,449	848	589
	[TCE]	11	-	-	-	-	-	-	-	15	14	12	-			
	est TCE mass	1.1	-	-	-	-	-	-	-	13.1	3.9	8.3	-	26.3	0.1	
COS-71	pumpage	67,571	-	-	-	-	19,511	61,313	63,393	68,730	71,645	68,630	72,187	492,981	1,351	938
	[TCE]	94						92	92	89	83	78	74			
	est TCE mass	53.0	-	-	-	-	-	47.0	48.6	51.0	49.6	44.6	44.5	338.4	0.9	
COS-72	pumpage	30,689	-	-	-	-	-	-	64,979	89,224	94,028	88,201	93,727	460,848	1,263	877
	[TCE]	-	-	-	-	-	-	-	-	26	28	30	29			
	est TCE mass	-	-	-	-	-	-	-	-	19.3	22.0	22.1	22.7	86.0	0.2	
COS-75A	pumpage	82,897	1,090	-	-	-	20,392	70,797	71,345	76,041	79,910	77,310	80,352	560,133	1,535	1,066
	[TCE]	160	-	-	-	-	-	140	150	150	140	140	130			
	est TCE mass	110.6	-	-	-	-	-	82.6	89.2	95.1	93.3	90.2	87.1	648	1.8	
CGTF total	pumpage	192,679	1,090				39,903	132,110	277,473	338,515	278,613	316,762	246,266	1,823,411	4,996	3,469
	est TCE mass	165						130	138	179	169	165	154	1,099	3.01	
Miller Road Treatment Facility:																
PCX-1	pumpage	89,190	80,360	90,050	90,790	90,090	63,370	86,490	87,900	89,390	97,510	61,750	56,590	983,480	2,694	1,871
	[TCE]	70	67	67	64	61	64	63	65	68	63	68	71			
	est TCE mass	52.1	44.9	50.3	48.4	45.8	33.8	45.4	47.6	50.7	51.2	35.0	33.5	539	1.5	
AAWC-15	pumpage	84,570	82,400	53,960	4,180	55,910	N.I.S.	N.I.S.	N.I.S.	N.I.S.	N.I.S.	N.I.S.	N.I.S.	281,020	770	535
	[TCE]	2.6	2.4	2.4	2.1	3.1	-	-	-	-	-	-	-			
	est TCE mass	1.8	1.6	1.1	0.1	1.4	-	-	-	-	-	-	-	6	0.02	
MRTF Total	pumpage	173,760	162,760	144,010	94,970	146,000	63,370	86,490	87,900	89,390	97,510	61,750	56,590	1,264,500	3,464	2,406
	est TCE mass	53.9	46.5	51.4	48.5	47.3	33.8	45.4	47.6	50.7	51.2	35.0	33.5	544.9	1.49	
Area 7 Groundwater and Extraction and Treatment System:																
7EX-1UA	pumpage	1,276	1,392	1,583	1,656	1,530	1,443	1,531	1,491	1,482	1,626	1,582	1,090	17,682	48	34
	[TCE]	9	9	9	9	9	9	7	7	7	6	6	6			
	est TCE mass	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.1	0.00	
7EX-3aMA	pumpage	4,290	5,448	6,348	6,394	5,998	6,770	6,852	6,650	6,693	6,297	5,852	6,429	74,021	203	141
	[TCE]	570	570	570	610	610	610	620	620	620	580	580	580			
	est TCE mass	20.4	25.9	30.2	32.5	30.5	34.4	35.4	34.4	34.6	30.5	28.3	31.1	368.1	1.0	
7EX-4MA	pumpage	991	1,133	1,165	1,177	1,132	966	1,271	1,310	1,294	1,039	1,141	171	12,790	35	24
	[TCE]	1,600	1,600	1,600	1,400	1,400	1,400	1,400	1,400	1,400	1,400	1,400	1,400			
	est TCE mass	13.2	15.1	15.5	13.7	13.2	11.3	14.8	15.3	15.1	12.1	13.3	2.0	154.8	0.4	
7EX-5MA	pumpage	6,980	9,404	9,928	9,291	8,322	9,100	9,094	8,699	8,872	9,000	8,799	5,747	103,236	283	196
	[TCE]	450	450	450	630	630	630	530	530	530	540	540	540			
	est TCE mass	26.2	35.3	37.3	48.8	43.7	47.8	40.2	38.4	39.2	40.5	39.6	25.9	462.9	1.3	
Area 7 Total	pumpage	13,537	17,377	19,024	18,518	16,982	18,279	18,748	18,150	18,341	17,962	17,374	13,437	207,729	569	395
	est TCE mass	59.9	76.4	83.1	95.2	87.5	93.6	90.5	88.2	89.0	83.2	81.3	59.0	987.0	2.70	
Area 12 Groundwater Extraction and Treatment System:																
MEX-1MA	pumpage	N.I.S.	2,700	33,690	43,380	51,030	8,050	-	18,200	49,950	55,820	56,930	13,000	332,750	912	633
	[TCE]	-	63	65	59	57	61	-	71	60	46	66	65			
	est TCE mass	-	1.4	18.3	21.3	24.3	4.1	-	10.8	25.0	21.4	31.3	7.0	165	0.5	
SRP 23.6E-6N	pumpage	N.I.S.	N.I.S.	12,460	5,940	-	19,400	763	-	5,950	4,900	-	-	49,413	135	94
	[TCE]	-	-	-	130	130	130	110	110	110	100	100	100			
	est TCE mass	-	-	-	6.4	-	21.0	0.7	-	5.5	4.1	-	-	38	0.1	
Area 12 Total	pumpage	-	2,700	46,150	49,320	51,030	27,450	763	18,200	55,900	60,720	56,930	13,000	382,163	1,047	727
	est TCE mass	-	1.4	18.3	27.8	24.3	25.1	0.7	10.8	30.4	25.5	31.3	7.0	202.6	0.56	
TOTALS	pumpage	379,976												3,677,803	10,076	6,997
	est TCE mass	278												2,833	8	

Note:
Pumpage reported in thousands of gallons
TCE concentration reported in µg/L
TCE mass reported in pounds
N.I.S. indicates the well was not in service at the time of sampling

TABLE 9. 2007 LABORATORY RESULTS FOR VOLATILE ORGANIC COMPOUNDS OBTAINED AT MRTF, AREA 7 GWETS, AND AREA 12 GWETS
(results presented in µg/L)

Sample Location	Field Sample ID	Sample Date	Sample Time	Sample Type	Lab	1,1,1-TCA	1,1-DCE	TCM	PCE	TCE
AREA-7										
SP-102-S	SP102	1/2/2007	14:10	PRI	TGI	<0.5	<0.5	**0.7**	**3.5**	**660 D2**
SP-102-S	SP-102	2/5/2007	15:40	PRI	TGI	<0.5	<0.5	**0.8**	**4.0**	**730 D2**
SP-102-S	SP-102	4/2/2007	15:30	PRI	TGI	<0.5	<0.5	**0.8**	**4.2**	**700 D2**
SP-102-S	SP-102	5/7/2007	12:15	PRI	TGI	<0.5	<0.5	**0.8**	**4.2**	**730 D2**
SP-102-S	SP_102	6/4/2007	15:20	PRI	TGI	<0.5	<0.5	**0.8**	**5.0**	**790 D2**
SP-102-S	SP_102	7/2/2007	14:55	PRI	TGI	<0.5	<0.5	**0.7**	**4.4**	**700 D2**
SP-102-S	SP_102	8/2/2007	14:40	PRI	TGI	<0.5	<0.5	**0.7**	**4.2**	**630 D2**
SP-102-S	SP-102	9/4/2007	15:55	PRI	TGI	<0.5 L1	<0.5	<2.5 D1	**3.6**	**630 D2**
SP-102-S	SP-102	10/1/2007	12:35	PRI	CAS	<0.5	<0.5	**0.68**	**3.9**	**680**
SP-102-S	SP-102	11/8/2007	15:40	PRI	TGI	<0.5	<0.5	**0.6**	**4.0**	**590 D2**
SP-102-S	SP-102	12/5/2007	10:25	PRI	TGI	<0.5	<0.5	**0.6**	**4.2**	**590 D2**
SP-103-S	SP103	1/2/2007	14:15	PRI	TGI	<0.5	<0.5	**0.7**	**2.2**	**330 D2**
SP-103-S	SP-103	2/5/2007	15:35	PRI	TGI	<0.5	<0.5	**0.8**	**3.5**	**560 D2**
SP-103-S	SP-103	4/2/2007	15:25	PRI	TGI	<0.5	<0.5	**0.8**	**1.7**	**170 D2**
SP-103-S	SP-103	5/7/2007	12:10	PRI	TGI	<0.5	<0.5	**0.7**	**2.8**	**340 D2**
SP-103-S	SP_103	6/4/2007	15:15	PRI	TGI	<0.5	<0.5	**0.8**	**1.8**	**130 D2**
SP-103-S	SP_103	7/2/2007	14:50	PRI	TGI	<0.5	<0.5	**0.7**	**2.8**	**380 D2**
SP-103-S	SP_103	8/2/2007	14:35	PRI	TGI	<0.5	<0.5	**0.7**	**3.0**	**360 D2**
SP-103-S	SP-103	9/4/2007	15:50	PRI	TGI	<0.5 L1	<0.5	<2.5 D1	**1.4**	**130 D2**
SP-103-S	SP-103	10/1/2007	12:32	PRI	CAS	<0.5	<0.5	**0.68**	**1.4**	**180**
SP-103-S	SP-103	11/8/2007	15:45	PRI	TGI	<0.5	<0.5	**0.7**	**1.8**	**130 D2**
SP-103-S	SP-103	12/5/2007	10:20	PRI	TGI	<0.5	<0.5	**0.7**	**1.2**	**100 D2**
SP-105-S	SP105	1/2/2007	14:20	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
SP-105-S	SP-105	2/5/2007	15:30	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
SP-105-S	SP-105	4/2/2007	15:20	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
SP-105-S	SP-105	5/7/2007	12:05	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
SP-105-S	SP_105	6/4/2007	15:10	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
SP-105-S	SP_105	7/2/2007	14:45	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
SP-105-S	SP_105	8/2/2007	14:30	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
SP-105-S	SP-105	9/4/2007	15:45	PRI	TGI	<0.5 L1	<0.5	<0.5 L1	<0.5	<0.5
SP-105-S	SP-105	10/1/2007	12:29	PRI	CAS	<0.5	<0.5	<0.5	<0.5	<0.5
SP-105-S	SP-105	11/8/2007	15:50	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
SP-105-S	SP-105	12/5/2007	10:15	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5

TABLE 9. 2007 LABORATORY RESULTS FOR VOLATILE ORGANIC COMPOUNDS OBTAINED AT MRTF, AREA 7 GWETS, AND AREA 12 GWETS
(results presented in µg/L)

Sample Location	Field Sample ID	Sample Date	Sample Time	Sample Type	Lab	1,1,1-TCA	1,1-DCE	TCM	PCE	TCE
AREA-12										
WSP-1	WSP-1-1A-022707	2/27/2007	14:45	PRI	TGI	<0.5	**3.0**	**2.0**	**6.8**	**61 D2**
WSP-1	WSP-1-1A-030607	3/6/2007	13:27	PRI	TGI	<0.5	**2.4**	**2.1**	**6.2**	**67 D2**
WSP-1	WSP-1-1B-030607	3/6/2007	13:25	DUP	TGI	<0.5	**2.5**	**2.2**	**6.2**	**67 D2**
WSP-1	WSP-1-1A-040407	4/4/2007	14:00	PRI	TGI	<0.5	**1.7**	**6.9**	**3.9**	**150 D2**
WSP-1	WSP-1-1A-050107	5/2/2007	15:10	PRI	TGI	<0.5	**2.0**	**2.4**	**3.8**	**59 D2**
WSP-1	WSP-1-1A-060407	6/4/2007	14:50	PRI	TGI	<0.5	**1.7**	**2.5**	**4.2**	**63 D2**
WSP-1	WSP-1-1A-070207	7/2/2007	15:20	PRI	TGI	<0.5	**1.3**	**6.1**	**3.1**	**110 D2**
WSP-1	WSP-1-1A-082707	8/27/2007	15:30	PRI	TGI	<0.5	**3.0**	**2.7**	**6.0**	**72 D2**
WSP-1	WSP-1-1A-091007	9/10/2007	15:45	PRI	TGI	<0.5	**2.2**	**2.8**	**4.4**	**62 D2**
WSP-1	WSP-1-1A-100107	10/1/2007	12:45	PRI	CAS	<0.5	**1.2**	**5.3**	**2.7**	**110**
WSP-1	WSP-1-1A-110507	11/5/2007	14:05	PRI	TGI	<0.5	**2.3**	**2.3**	**4.4**	**61 D2**
WSP-1	WSP-1-1B-110507	11/5/2007	14:10	DUP	TGI	<0.5	**2.4**	**2.4**	**4.3**	**62 D2**
WSP-1	WSP-1-1A-121807	12/18/2007	13:00	PRI	TGI	<0.5	**3.2**	**2.1**	**5.5**	**64 D2**
WSP-2	WSP-2-1A-022707	2/27/2007	14:50	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
WSP-2	WSP-2-1A-030607	3/6/2007	13:15	PRI	TGI	<0.5	<0.5	<0.5	<0.5	**0.9**
WSP-2	WSP-2-1A-040407	4/4/2007	14:05	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
WSP-2	WSP-2-1A-050107	5/2/2007	15:15	PRI	TGI	<0.5	<0.5	<0.5	<0.5	**0.6**
WSP-2	WSP-2-1A-060407	6/4/2007	15:00	PRI	TGI	<0.5	<0.5	<0.5	<0.5	**0.6**
WSP-2	WSP-2-1B-060407	6/4/2007	15:00	DUP	TGI	<0.5	<0.5	<0.5	<0.5	**0.7**
WSP-2	WSP-2-1A-070207	7/2/2007	15:15	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
WSP-2	WSP-2-1A-082707	8/27/2007	15:30	PRI	TGI	<0.5	<0.5	<0.5	<0.5	**0.9**
WSP-2	WSP-2-1B-082707	8/27/2007	15:30	DUP	TGI	<0.5	<0.5	<0.5	<0.5	**0.8**
WSP-2	WSP-2-1A-091007	9/10/2007	16:00	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
WSP-2	WSP-2-1A-100107	10/1/2007	15:30	PRI	CAS	<0.5	<0.5	<0.5	<0.5	<0.5
WSP-2	WSP-2-1B-100107	10/1/2007	15:30	DUP	CAS	<0.5	<0.5	<0.5	<0.5	<0.5
WSP-2	WSP-2-1A-110507	11/5/2007	14:35	PRI	TGI	<0.5	<0.5	<0.5	<0.5	**0.7**
WSP-2	WSP-2-1A-121807	12/18/2007	14:25	PRI	TGI	<0.5	<0.5	<0.5	<0.5	**0.8**
MRTF										
AZC Outfall	AZ Canal Outfall	1/2/2007	7:40	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
AZC Outfall	AZ Canal Outfall	2/5/2007	7:50	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
AZC Outfall	AZ Canal Outfall	3/6/2007	8:25	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
AZC Outfall	MRTF Outfall	6/5/2007	7:30	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
AZC Outfall	MRTF Outfall	6/19/2007	6:45	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
AZC Outfall	Canal Outfall	7/2/2007	6:50	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5

TABLE 9. 2007 LABORATORY RESULTS FOR VOLATILE ORGANIC COMPOUNDS OBTAINED AT MRTF, AREA 7 GWETS, AND AREA 12 GWETS
(results presented in µg/L)

Sample Location	Field Sample ID	Sample Date	Sample Time	Sample Type	Lab	1,1,1-TCA	1,1-DCE	TCM	PCE	TCE
AZC Outfall	AZ Canal Outfall	8/6/2007	8:15	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
AZC Outfall	AZ Canal Eff	9/10/2007	7:50	PRI	TGI	<0.5 L1	<0.5	<0.5 L1	<0.5	<0.5
AZC Outfall	AZ CANAL OUTFALL	10/8/2007	7:50	PRI	CAS	<0.5	<0.5	<0.5	<0.5	<0.5
AZC Outfall	AZ CANAL OUTFALL	11/12/2007	8:20	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
AZC Outfall	AZ Canal Outfall	12/14/2007	10:20	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
MRTF Eff	MRTF Eff	1/2/2007	7:30	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
MRTF Eff	MRTF Eff	1/8/2007	7:30	PRI	TGI	<0.5	<0.5	**0.6**	<0.5	<0.5
MRTF Eff	MRTF Eff	1/16/2007	7:25	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
MRTF Eff	MRTF Eff	1/22/2007	7:25	PRI	TGI	<0.5	<0.5	<0.5 L1,N1	<0.5	<0.5
MRTF Eff	MRTF Eff	1/29/2007	9:00	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
MRTF Eff	MRTF Eff	2/5/2007	7:30	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
MRTF Eff	MRTF Eff	2/12/2007	7:30	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
MRTF Eff	MRTF Eff	2/19/2007	7:30	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
MRTF EFF	MRTF EFF	2/26/2007	9:10	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
MRTF Eff	MRTF EFF	3/6/2007	8:15	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
MRTF Eff	MRTF Eff	3/12/2007	7:30	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
MRTF Eff	MRTF EFF	3/19/2007	7:30	PRI	TGI	<0.5	<0.5	**0.5**	<0.5	<0.5
MRTF Eff	MRTF Eff	3/26/2007	8:30	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
MRTF Eff	MRTF EFF	4/2/2007	8:30	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
MRTF Eff	MRTF EFF	5/14/2007	7:50	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
MRTF Eff	MRTF Eff	5/21/2007	8:40	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
MRTF Eff	MRTF EFF	5/29/2007	7:50	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
MRTF Eff	MRTF Eff	6/5/2007	7:10	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
MRTF Eff	MRTF Eff	6/11/2007	8:00	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
MRTF Eff	MRTF Eff	6/25/2007	8:00	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
MRTF Eff	MRTF EFF	7/2/2007	6:40	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
MRTF Eff	MRTF EFF	7/9/2007	8:00	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
MRTF Eff	MRTF Eff	7/18/2007	7:10	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
MRTF Eff	MRTF Eff	7/23/2007	6:55	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
MRTF Eff	MRTF EFF	7/30/2007	7:45	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
MRTF Eff	MRTF Eff	8/6/2007	8:00	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
MRTF Eff	MRTF Eff	8/13/2007	7:45	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
MRTF Eff	MRTF EFF	8/20/2007	7:00	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
MRTF Eff	MRTF EFF	8/27/2007	8:52	PRI	AEL	<0.5	<0.5	<0.5	<0.5	<0.5
MRTF Eff	MRTF EFF	9/4/2007	8:30	PRI	TGI	<0.5 L1	<0.5	<0.5 L1	<0.5	<0.5

TABLE 9. 2007 LABORATORY RESULTS FOR VOLATILE ORGANIC COMPOUNDS OBTAINED AT MRTF, AREA 7 GWETS, AND AREA 12 GWETS
(results presented in µg/L)

Sample Location	Field Sample ID	Sample Date	Sample Time	Sample Type	Lab	1,1,1-TCA	1,1-DCE	TCM	PCE	TCE
MRTF Eff	MRTF Eff	9/10/2007	7:40	PRI	TGI	<0.5 L1	<0.5	<0.5 L1	<0.5	<0.5
MRTF Eff	MRTF EFF	9/18/2007	7:30	PRI	CAS	<0.50	<0.50	<0.50	<0.50	<0.50
MRTF Eff	MRTF EFF	9/24/2007	8:40	PRI	CAS	<0.50	<0.50	<0.50	<0.50	<0.50
MRTF Eff	MRTF EFF	10/1/2007	7:30	PRI	CAS	<0.5	<0.5	<0.5	<0.5	<0.5
MRTF Eff	MRTF EFF	10/8/2007	7:30	PRI	CAS	<0.5	<0.5	<0.5	<0.5	<0.5
MRTF Eff	MRTF Eff	10/15/2007	7:50	PRI	TGI	<0.5	<0.5	**0.5**	<0.5	**9.3**
MRTF Eff	MRTF EFF	10/22/2007	7:30	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
MRTF Eff	MRTF Eff	10/29/2007	7:26	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
MRTF Eff	MRTF Eff	11/5/2007	9:45	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
MRTF Eff	MRTF EFF	11/12/2007	8:10	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
MRTF Eff	MRTF EFF	11/19/2007	6:31	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
MRTF Eff	MRTF EFF	12/26/2007	9:02	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
MRTF Eff	MRTF EFF	12/28/2007	9:12	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Tower 1 Eff	TWR #1 EFF	5/14/2007	7:40	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Tower 1 Eff	Tower 1 Eff	5/21/2007	8:20	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Tower 2 Eff	Tower 2 Eff	10/15/2007	7:40	PRI	TGI	<0.5	<0.5	**0.8**	<0.5	**14**
Tower 3 Eff	Tower #3 Eff PCX-1	1/2/2007	7:35	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Tower 3 Eff	Tower #3 Eff PCX-1	1/8/2007	7:40	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Tower 3 Eff	Tower #3 Eff PCX-1	1/16/2007	7:30	PRI	TGI	<0.5	<0.5	<0.5 L1,N1	<0.5	<0.5
Tower 3 Eff	Tower #3 Eff PCX-1	1/22/2007	7:30	PRI	TGI	<0.5	<0.5	<0.5 L1,N1	<0.5	<0.5
Tower 3 Eff	Tower #3 Eff PCX-1	1/29/2007	9:05	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Tower 3 Eff	Tower #3 Eff PCX-1	2/5/2007	7:40	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Tower 3 Eff	Tower #3 Eff PCX-1	2/12/2007	7:40	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Tower 3 Eff	Tower #3 Eff PCX-1	2/19/2007	7:40	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Tower 3 Eff	Tower #3 EFF (PCX-1)	2/26/2007	9:00	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Tower 3 Eff	Tower 3 EFF (PCX-1	3/6/2007	8:20	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Tower 3 Eff	Tower #3 Eff	3/12/2007	7:35	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Tower 3 Eff	TOWER #3 EFF	3/19/2007	7:40	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Tower 3 Eff	Tower 3 Eff	3/26/2007	8:40	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Tower 3 Eff	Tower #3 EFF	4/9/2007	6:45	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Tower 3 Eff	Tower 3 Eff	4/16/2007	8:35	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Tower 3 Eff	Tower 3 Eff	4/22/2007	8:35	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Tower 3 Eff	TOWER 3 EFF	5/7/2007	8:50	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Tower 3 Eff	TWR #3 EFF	5/14/2007	7:30	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Tower 3 Eff	Tower 3 Eff	5/21/2007	8:30	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5

TABLE 9. 2007 LABORATORY RESULTS FOR VOLATILE ORGANIC COMPOUNDS OBTAINED AT MRTF, AREA 7 GWETS, AND AREA 12 GWETS
(results presented in µg/L)

Sample Location	Field Sample ID	Sample Date	Sample Time	Sample Type	Lab	1,1,1-TCA	1,1-DCE	TCM	PCE	TCE
Tower 3 Eff	Tower 3 Eff	5/29/2007	7:40	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Tower 3 Eff	Tower 3 Eff	6/5/2007	7:00	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Tower 3 Eff	Tower 3 Eff	6/11/2007	7:50	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Tower 3 Eff	Tower 3 Eff	6/19/2007	6:30	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Tower 3 Eff	Tower 3 Eff	6/25/2007	7:50	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Tower 3 Eff	Tower 3 EFF	7/2/2007	6:30	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Tower 3 Eff	Tower 3 EFF	7/9/2007	7:45	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Tower 3 Eff	Tower 3 Eff	7/18/2007	7:00	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Tower 3 Eff	Tower 3 Eff	7/23/2007	6:45	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Tower 3 Eff	Tower 3 EFF	7/30/2007	7:30	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Tower 3 Eff	Tower 3 Eff	8/6/2007	7:45	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Tower 3 Eff	Tower 3 Eff	8/13/2007	7:30	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Tower 3 Eff	Tower 3 EFF	8/20/2007	6:45	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Tower 3 Eff	Tower 3 Eff	8/27/2007	8:40	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Tower 3 Eff	Tower 3 EFF	9/4/2007	8:15	PRI	TGI	<0.5 L1	<0.5	<0.5 L1	<0.5	<0.5
Tower 3 Eff	Tower 3 Eff	9/10/2007	7:30	PRI	TGI	<0.5 L1	<0.5	<0.5 L1	<0.5	<0.5
Tower 3 Eff	TOWER 3 EFF	9/18/2007	7:15	PRI	CAS	<0.50	<0.50	<0.50	<0.50	<0.50
Tower 3 Eff	TOWER 3 EFF	9/24/2007	8:30	PRI	CAS	<0.50	<0.50	<0.50	<0.50	<0.50
Tower 3 Eff	TOWER 3 EFF	10/1/2007	7:15	PRI	CAS	<0.5	<0.5	<0.5	<0.5	<0.5
Tower 3 Eff	TOWER 3 EFF	10/8/2007	7:20	PRI	CAS	<0.5	<0.5	<0.5	<0.5	<0.5
Tower 3 Eff	Tower 3 EFF	10/22/2007	7:20	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Tower 3 Eff	Tower 3 Eff	10/29/2007	7:14	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Tower 3 Eff	Tower 3 Eff	11/5/2007	9:40	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Tower 3 Eff	Tower 3 EFF	11/12/2007	8:00	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Tower 3 Eff	Tower 3 EFF	11/19/2007	6:24	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Tower 3 Eff	Tower 3 Effluent	12/12/2007	12:00	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Tower 3 Eff	PCX-1 Effluent	12/12/2007	15:40	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Tower 3 Eff	Tower 3 Eff (PCX-1)	12/14/2007	10:00	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Tower 3 Eff	Tower 3 Effluent (PCX 1)	12/18/2007	9:20	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Tower 3 Eff	Tower 3 Effluent (PCX-1)	12/19/2007	8:00	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Tower 3 Eff	Tower 3 Eff (PCX-1)	12/20/2007	7:15	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Tower 3 Eff	TOWER 3 EFF	12/26/2007	8:29	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Tower 3 Eff	Tower 3 EFF	12/28/2007	9:07	PRI	TGI	<0.5	<0.5	<0.5	<0.5	<0.5

TABLE 9. 2007 LABORATORY RESULTS FOR VOLATILE ORGANIC COMPOUNDS OBTAINED AT MRTF, AREA 7 GWETS, AND AREA 12 GWETS
(results presented in µg/L)

Sample Location	Field Sample ID	Sample Date	Sample Time	Sample Type	Lab	1,1,1-TCA	1,1-DCE	TCM	PCE	TCE
Trip/Field Blanks										
Trip Blank Area-7	Trip blank	1/2/2007	14:10	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank Area-7	Trip Blank	2/5/2007	15:30	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank Area-7	Trip Blank	4/2/2007	15:35	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank Area-7	Trip Blank	5/7/2007	12:20	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank Area-7	TB	6/4/2007	0:00	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank Area-7	Trip Blank	7/2/2007	15:00	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank Area-7	Trip Blank	8/2/2007	0:00	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank Area-7	Trip Blank	9/4/2007	0:00	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank Area-7	Trip BlanK	11/8/2007	15:55	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank Area-7	Trip Blank	12/5/2007	0:00	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank Area-12	TB	2/27/2007	0:00	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank Area-12	FB-1-1A-022707	2/27/2007	14:30	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank Area-12	TB	3/6/2007	0:00	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank Area-12	FB-1-1A-030607	3/6/2007	13:30	TRA	TGI	<0.5	<0.5	**1.0**	<0.5	<0.5
Trip Blank Area-12	Trip Blank	4/4/2007	0:00	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank Area-12	FB-1-1A-040407	4/4/2007	13:55	TRA	TGI	<0.5	<0.5	**2.9**	<0.5	<0.5
Trip Blank Area-12	TB	5/2/2007	0:00	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank Area-12	FB-1-1A-050107	5/2/2007	14:45	TRA	TGI	<0.5	<0.5	**0.7**	<0.5	<0.5
Trip Blank Area-12	TB	6/4/2007	0:00	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank Area-12	FB-1-1A-060407	6/4/2007	14:30	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank Area-12	TB	7/2/2007	0:00	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank Area-12	FB-1-1A-070207	7/2/2007	15:00	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank Area-12	FB-1-1A-082707	8/27/2007	15:00	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank Area-12	TB	9/10/2007	0:00	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank Area-12	FB-1-1A-091007	9/10/2007	15:30	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank Area-12	TB	10/1/2007	10:00	TRA	CAS	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank Area-12	FB-1-1A-100107	10/1/2007	13:00	TRA	CAS	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank Area-12	TB	11/5/2007	0:00	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank Area-12	FB-1-1A-110507	11/5/2007	13:30	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank Area-12	TB	12/18/2007	0:00	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank Area-12	FB-1-1A-121807	12/18/2007	12:00	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank MRTF	Travel Blank	1/2/2007	7:30	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank MRTF	Travel Blank	1/8/2007	7:30	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank MRTF	Travel Blank	1/16/2007	7:25	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5

TABLE 9. 2007 LABORATORY RESULTS FOR VOLATILE ORGANIC COMPOUNDS OBTAINED AT MRTF, AREA 7 GWETS, AND AREA 12 GWETS
(results presented in µg/L)

Sample Location	Field Sample ID	Sample Date	Sample Time	Sample Type	Lab	1,1,1-TCA	1,1-DCE	TCM	PCE	TCE
Trip Blank MRTF	Travel Blank	1/22/2007	7:25	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank MRTF	Travel Blank	1/29/2007	9:00	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank MRTF	Travel Blank	2/5/2007	7:30	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank MRTF	Travel Blank	2/12/2007	7:30	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank MRTF	Travel Blank	2/19/2007	7:30	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank MRTF	Travel Blank	2/26/2007	9:00	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank MRTF	Trip Blank	3/6/2007	0:00	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank MRTF	Travel Blank	3/12/2007	7:30	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank MRTF	Travel Blank	3/19/2007	7:30	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank MRTF	Travel Blank	3/26/2007	8:30	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank MRTF	Travel Blank	4/2/2007	8:30	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank MRTF	Travel / Temp	4/9/2007	6:45	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank MRTF	Blank	5/29/2007	0:00	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank MRTF	Travel Blank	6/5/2007	0:00	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank MRTF	Travel Blank	6/11/2007	0:00	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank MRTF	Trip Blank	6/19/2007	0:00	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank MRTF	Travel Blank	7/2/2007	0:00	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank MRTF	Trip Blank	7/9/2007	0:00	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank MRTF	Trip Blank	7/18/2007	0:00	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank MRTF	Trip Blank	7/23/2007	0:00	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank MRTF	Trip Blank	7/30/2007	0:00	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank MRTF	Travel Blank	8/6/2007	0:00	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank MRTF	Travel Blank	8/13/2007	0:00	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank MRTF	Trip Blank	8/20/2007	0:00	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank MRTF	Trip Blank	9/4/2007	0:00	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank MRTF	Travel Blank	9/10/2007	0:00	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank MRTF	TRAVEL BLANK	9/18/2007	7:15	TRA	CAS	<0.50	<0.50	<0.50	<0.50	<0.50
Trip Blank MRTF	TRIP BLANK	10/1/2007	0:00	TRA	CAS	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank MRTF	TRIP BLANK	10/8/2007	7:20	TRA	CAS	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank MRTF	Trip Blank	10/15/2007	0:00	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank MRTF	Trip Blank	10/22/2007	0:00	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank MRTF	Trip Blank	10/29/2007	0:00	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank MRTF	TRAVEL BLANK	11/5/2007	0:00	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank MRTF	TRIP BLANK	11/12/2007	0:00	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank MRTF	Trip Blank	11/19/2007	0:00	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5

TABLE 9. 2007 LABORATORY RESULTS FOR VOLATILE ORGANIC COMPOUNDS OBTAINED AT MRTF, AREA 7 GWETS, AND AREA 12 GWETS
(results presented in µg/L)

Sample Location	Field Sample ID	Sample Date	Sample Time	Sample Type	Lab	1,1,1-TCA	1,1-DCE	TCM	PCE	TCE
Trip Blank MRTF	Trip Blank	12/18/2007	0:00	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank MRTF	Trip Blank	12/19/2007	0:00	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank MRTF	Trip Blank	12/20/2007	0:00	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank MRTF	Trip Blank	12/26/2007	0:00	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank MRTF	Trip Blank	12/28/2007	0:00	TRA	TGI	<0.5	<0.5	<0.5	<0.5	<0.5

Note:
<# = Below detection limit
PRI = Primary
DUP = Duplicate
TRA = Travel or Trip Blank
AEL = Aerotech Environmental Laboratories
CAS = Columbia Analytical Services
TGI = Transwest Geochem, Inc.
D1 = Sample required dilution due to matrix.
D2 = Sample required dilution due to high concentration of target analyte.
L1 = The associated blank spike recovery was above laboratory acceptance limits.
N1 = See case narrative.

1,1,1-TCA = 1,1,1-Trichloroethane
1,1-DCE = 1,1-Dichloroethene
TCM = Chloroform
PCE = Tetrachloroethene
TCE = Trichloroethene

TABLE 10. SUMMARY OF VOC MASS ESTIMATES IN UAU GROUNDWATER FOR OCTOBER 2007
NORTH INDIAN BEND WASH SITE, SCOTTSDALE, ARIZONA

POLYGON (WELL NAME)	TOTAL VOCs (micrograms per liter) [a]	ELEVATION BASE OF UAU (feet, MSL)[b]	ELEVATION UAU WATER TABLE (feet, MSL)[b]	SATURATED THICKNESS (feet)	POLYGON AREA (square feet)	SATURATED POLYGON VOLUME (cubic feet)	SATURATED PORE VOLUME (liters)	VOC MASS (gallons)	VOC MASS (pounds)
B-J	3.8	1,065	1125.2	60	1,312,017	78,983,423	671,019,470	0.47	5.62
B-3UA	0	1,072	1129.8	58	1,488,621	86,042,294	730,989,515	0.00	0.00
D-1UA	11	1,093	1143.2	50	1,155,418	58,001,984	492,767,452	1.00	11.95
E-2UA	0	1,069	1129.1	60	2,567,322	154,296,052	1,310,852,971	0.00	0.00
E-3UA	0.8	1,071	1124.5	54	1,605,557	85,897,300	729,757,687	0.11	1.29
E-4UA	0	1,103	1140.2	37	1,180,805	43,925,946	373,181,659	0.00	0.00
E-5UA	11	1,067	1125.9	59	1,563,483	92,089,149	782,361,781	1.58	18.98
E-6UA	0	1,043	1120.5	78	2,854,410	221,216,775	1,879,391,355	0.00	0.00
E-7UA	4.9	1,079	1123.3	44	2,135,156	94,587,411	803,586,266	0.72	8.68
E-9UA	7	1,065	1116.4	51	1,382,699	71,070,729	603,795,589	0.78	9.32
E-12UA	5	1,075	1134.2	59	1,868,432	110,611,174	939,719,354	0.86	10.36
E-13UA	4.3	1,080	1131.4	51	851,113	43,747,208	371,663,157	0.29	3.52
M-2UA	6	1,081	1132.6	52	1,081,841	55,822,996	474,255,424	0.52	6.27
M-3UA	0	1,072	1136.7	65	1,266,711	81,956,202	696,275,303	0.00	0.00
M-4UA	0	1,093	1133.7	41	1,606,588	65,388,132	555,517,950	0.00	0.00
M-5UA	0	1,100	1131.7	32	2,037,505	64,588,909	548,727,990	0.00	0.00
M-11UA	0	1,067	1125.9	59	2,607,678	153,592,234	1,304,873,544	0.00	0.00
M-13UA	4.3	1,079	1130.5	52	1,905,763	98,146,795	833,825,722	0.66	7.91
M-15UA	0	1,102	1134.3	32	2,850,181	92,060,846	782,121,332	0.00	0.00
M-16UA	0	1,080	1132.2	52	2,329,925	121,622,085	1,033,264,748	0.00	0.00
PG-3UA	1	1,046	1117.5	72	1,523,224	108,910,516	925,271,071	0.17	2.04
PG-4UA	33.4	1,055	1106.8	52	2,867,709	148,547,326	1,262,013,519	7.75	92.94
PG-5UA	8.6	1,036	1114.8	79	1,729,659	136,297,129	1,157,939,521	1.83	21.96
PG-6UA	2.5	1,043	1111.8	69	2,363,199	162,588,091	1,381,299,646	0.64	7.61
PG-7UA	0	1,041	1116.9	76	2,461,634	186,838,021	1,587,319,772	0.00	0.00
PG-8UA	3.7	1,060	1113.5	54	1,631,115	87,264,653	741,374,308	0.50	6.05
7EX-1UA[c]	6.7	1,092	1129.5	38	775,509	29,081,588	247,068,443	0.30	3.65
PG-10UA	1.3	1,089	1129.5	41	693,947	28,104,854	238,770,404	0.06	0.68
PG-11UA	4.3	1,076	1122.2	46	2,167,731	100,149,172	850,837,322	0.67	8.07
PG-12UA	0	1,088	1131.3	43	2,891,994	125,223,340	1,063,859,931	0.00	0.00
PG-13UA	0	1,079	1129.1	50	2,336,575	117,062,408	994,527,095	0.00	0.00
PG-15UA	0	1,097	1137.7	41	1,640,417	66,764,972	567,215,172	0.00	0.00
PG-16UA	4.5	1,079	1125.1	46	1,327,719	61,207,846	520,003,496	0.43	5.16
PG-17UA	0	1,089	1143.8	55	436,424	23,916,035	203,183,460	0.00	0.00
PG-18UA	1.7	1,045	1121.8	77	1,953,438	150,024,038	1,274,559,223	0.40	4.78
PG-19UA	5.5	1,049	1120.7	72	1,407,810	100,939,977	857,555,763	0.87	10.40
PG-20UA	0	1,050	1117.5	68	1,865,337	125,910,248	1,069,695,690	0.00	0.00
PG-21UA	0	1,065	1123.7	59	1,566,447	91,950,439	781,183,344	0.00	0.00
PG-22UA	15.2	1,067	1126.5	60	1,764,305	104,976,148	891,845,856	2.49	29.89
PG-23UA	5.2	1,055	1108.2	53	1,753,035	93,261,462	792,321,403	0.76	9.08
PG-24UA	7.2	1,054	1114.4	60	1,535,896	92,768,118	788,130,103	1.04	12.51
PG-25UA	8.9	1,056	1120.3	64	1,538,241	98,908,896	840,300,310	1.38	16.49
PG-26UA	0	1,087	1133.8	47	1,888,615	88,387,182	750,910,982	0.00	0.00
PG-27UA	0	1,058	1125.6	68	2,772,049	187,390,512	1,592,013,576	0.00	0.00
PG-28UA	14	1,061	1127.2	66	1,669,714	110,535,067	939,072,767	2.42	28.99
PG-29UA	2.3	1,080	1129.1	49	1,345,997	66,088,453	561,467,668	0.24	2.85
PG-30UA	0	1,074	1125.8	52	2,013,301	104,288,992	886,007,988	0.00	0.00
PG-31UA	43.7	1,081	1124.1	43	2,706,853	116,665,364	991,153,935	7.97	95.51
PG-32UA	0	1,100	1132.9	33	2,381,203	78,341,579	665,566,550	0.00	0.00
PG-33UA	0	1,115	1140.8	26	1,617,384	41,728,507	354,512,879	0.00	0.00
PG-34UA	0	1,110	1136.5	27	1,201,943	31,851,490	270,600,699	0.00	0.00
PG-36UA	14.3	1,103	1127.1	24	1,225,128	29,525,585	250,840,511	0.66	7.91
PG-39UA	0	1,062	1107.9	46	2,984,814	137,002,963	1,163,936,069	0.00	0.00
ST-1UA	0	1,083	1135.8	53	1,380,724	72,902,227	619,355,452	0.00	0.00
W-3UA	9.8	1,084	1131.8	48	2,138,932	102,240,950	868,608,436	1.57	18.77
TOTALS							**44,868,270,633**	**39.14**	**469.25**

[a] Includes total concentration of TCE, PCE, 1,1,1-TCA, DCE, and Chloroform from October 2006 water quality data set. "0" indicates either that concentrations of all VOCs were below the detect limit, the well was dry, or the well is no longer included in the NIBW Monitoring Program.

[b] Feet Above Mean Sea Level

[c] Water level estimated based on PG-10UA

TABLE 11. AVERAGE TCE CONCENTRATIONS FOR MONITOR WELLS WITHIN ZONE OF HYDRAULIC CAPTURE, MIDDLE ALLUVIUM UNIT, AREA 7

Average TCE Concentrations (micrograms per liter)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
D-2MA	---	5,600	4,650	3,500	2,200	2,177	2,650	2,164	2,200	1,650	1,650	1,145	828
E-10MA	5.6	5.9	6.0	11	15	15	15	13	10	8	7	6	5
PA-10MA	12	15	26	68	96	66	41	39	46	39	41	36	35
PA-12MA	190	135	163	360	760	616	616	572	580	483	483	400	380
W-1MA	2,800	1,045	560	200	460	1,404	680	348	495	270	335	151	129
W-2MA	3,000	1,950	2,050	1,950	3,233	3,830	4,071	4,325	4,875	4,725	5,275	4,325	4,225
ANNUAL AVERAGE	**1,202**	**1,458**	**1,243**	**1,015**	**1,127**	**1,351**	**1,346**	**1,243**	**1,368**	**1,196**	**1,298**	**1,010**	**934**

Five-Year Average TCE Concentrations (micrograms per liter)

1995-1999	**1,209**	**Start-Up of 7EX-3MA and 7EX-4MA Extraction Wells**
1996-2000	**1,239**	
1997-2001	**1,216**	
1998-2002	**1,216**	**Start-Up of 7EX-5MA Extraction Well**
1999-2003	**1,287**	**Area 7 GWETS Fully Operational**
2000-2004	**1,301**	**First computed 5-year running average**
2001-2005	**1,290**	
2002-2006	**1,223**	
2003-2007	**1,161**	

TABLE 12. AVERAGE TCE CONCENTRATIONS FOR MONITOR WELLS WITHIN ZONE OF HYDRAULIC CAPTURE, MIDDLE ALLUVIUM UNIT, AREA 12

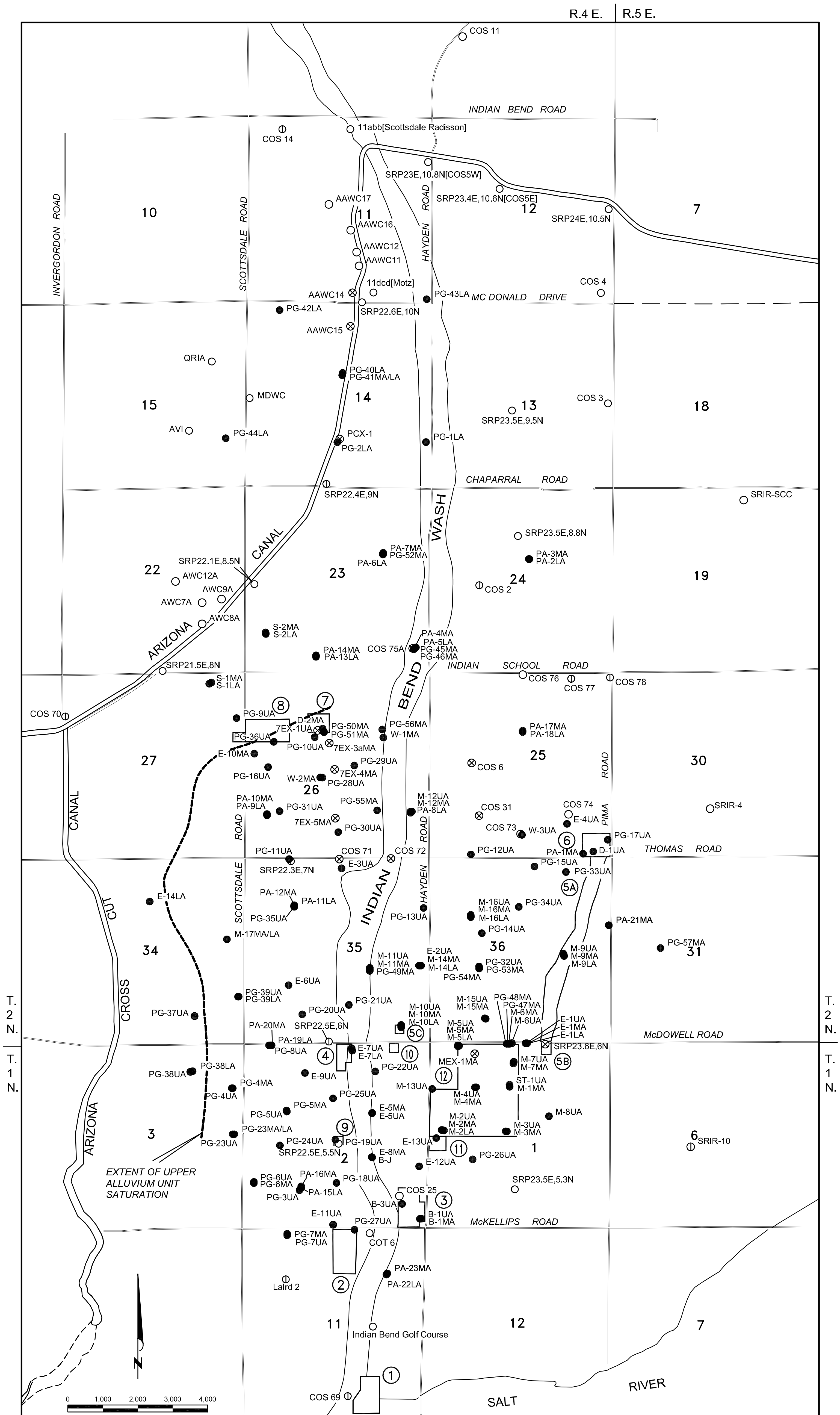
Average TCE Concentrations (micrograms per liter)

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
E-1MA	367	440	560	400	350	390	18	2.6	130	3.3	50	73	42	27
M-4MA	29	20	32	31	32	28	27	20	24	21	25	26	20	21
M-5MA	377	365	295	120	43	65	79	115	94	45	53	54	68	65
M-6MA	333	360	180	113	120	125	22	7.1	69	2	40	69	43	49
M-7MA	11	6.5	5.6	7.8	9.0	3.0	0	0.8	1.9	0.9	1.3	1.1	0.9	1.4
M-9MA	113	113	72	52	25	15	9.6	8.3	5.1	6.4	7.0	7.0	4.0	4.4
M-15MA	105	14	115	83	40	75	40	25	19	14	13	11	12	12
PA-21MA	44	20	7.7	7.5	3.4	1.6	1.7	0.8	0.3	0	0	1	0	0
ANNUAL AVERAGE	**172**	**167**	**158**	**102**	**78**	**88**	**24**	**22**	**43**	**12**	**24**	**30**	**24**	**22**

Five-Year Average TCE Concentrations (micrograms per liter)

1994-1998	**135**	
1995-1999	**119**	**Start-Up of MEX-1 and SRP Granite Reef Extraction**
1996-2000	**90**	**Area 12 GWETS Fully Operational**
1997-2001	**63**	
1998-2002	**51**	
1999-2003	**38**	
2000-2004	**25**	**First Computed 5-Year Running Average**
2001-2005	**26**	
2002-2006	**26**	
2003-2007	**22**	

ILLUSTRATIONS



EXPLANATION

- ● PA-15LA — MONITOR WELL LOCATION AND IDENTIFIER
- ⊗ COS75A — EXTRACTION WATER WELL LOCATION AND IDENTIFIER
- ○ COS 74 — PRODUCTION WATER WELL LOCATION AND IDENTIFIER
- ⦶ SRP22.5E,6N — INACTIVE PRODUCTION WATER WELL LOCATION AND IDENTIFIER

NORTH INDIAN BEND WASH AREA
MARICOPA COUNTY, ARIZONA

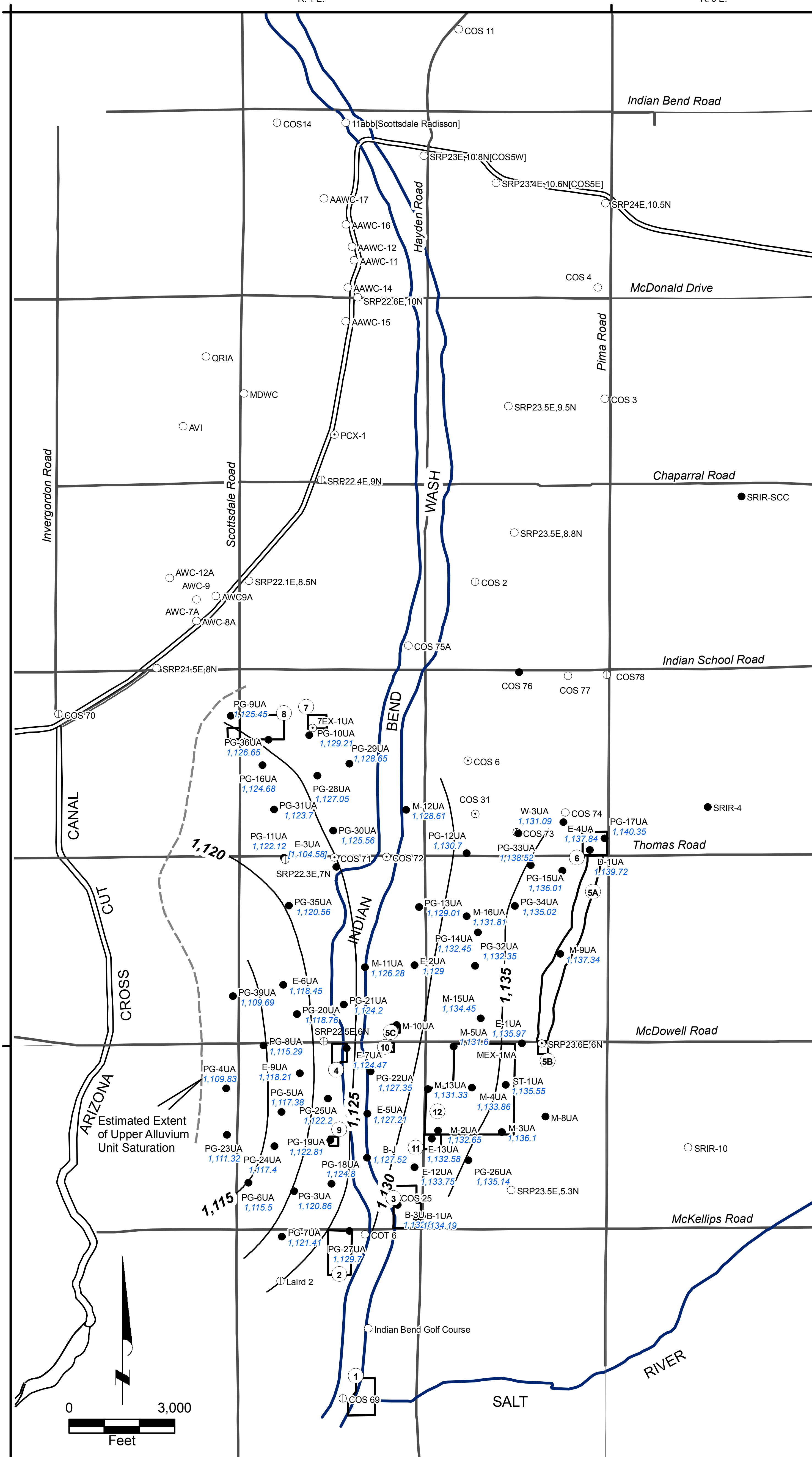
WELL LOCATION MAP

2008

North Indian Bend Wash Superfund Site

FIGURE 1

366.20\All Well locmap NAD83 Central zone\23Feb2008



R. 4 E.   R. 5 E.

EXPLANATION

PG-4UA ● Upper Alluvium Monitor Well Location and Identifier

1,109.83 Groundwater Level Altitude, in feet above mean sea level

COS75A ⊗ Extraction Water Well Location and Identifier

COS74 ○ Production Water Well Location and Identifier

SRP22.5E, 6N ⦶ Inactive Production Water Well Location and Identifier

NORTH INDIAN BEND WASH AREA

MARICOPA COUNTY, ARIZONA

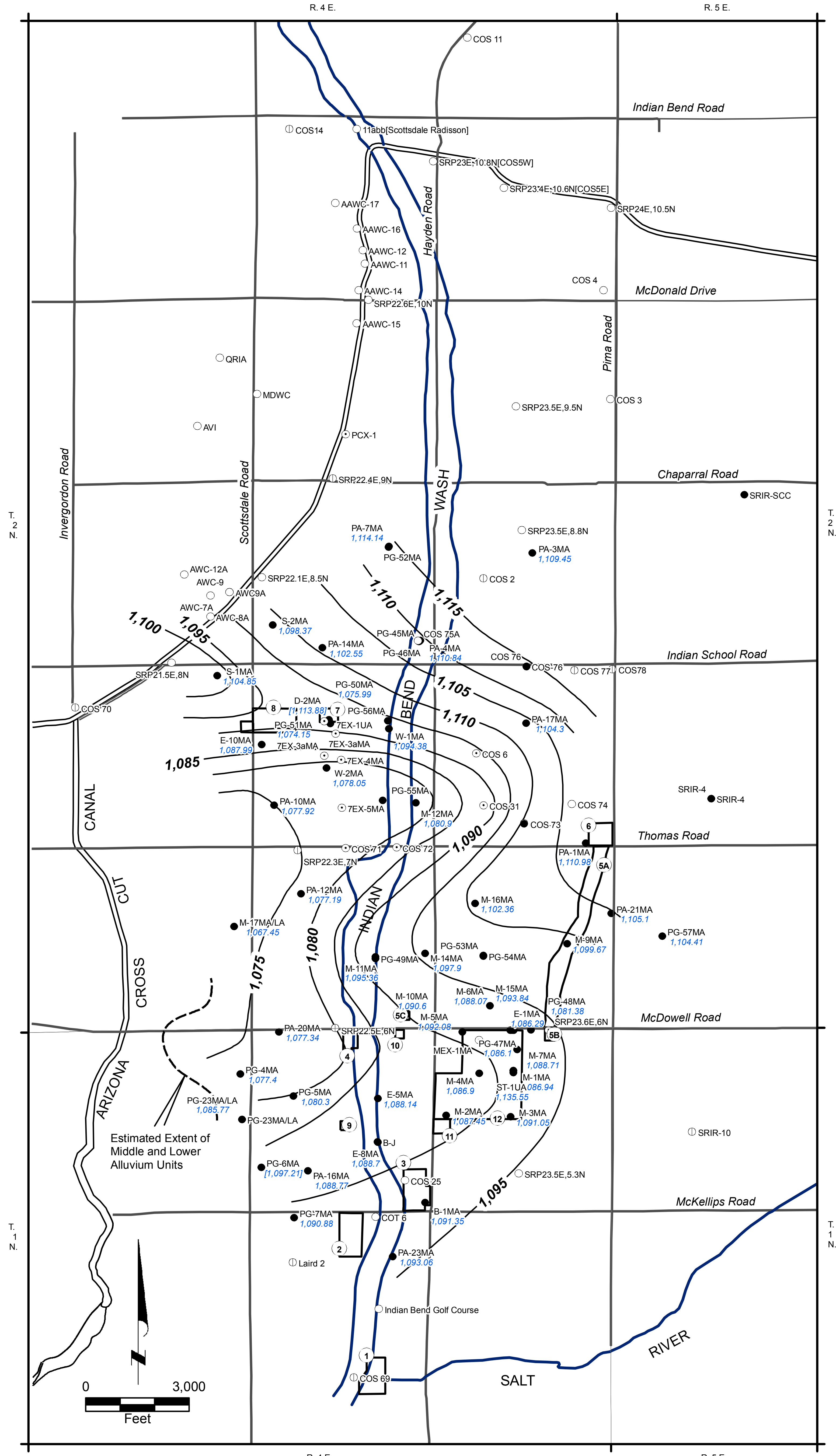
GROUNDWATER LEVEL CONTOURS
UPPER ALLUVIUM UNIT
APRIL 2007

North Indian Bend Wash Superfund Site

2008

FIGURE 2

GIS-TUC\366.1402\WaterLevel\2007\UAU_WLApr2007.mxd\27Feb2008



EXPLANATION

PG-6MA ●	Middle Alluvium Monitor Well Location and Identifier
1,097.21	Groundwater Level Altitude, in feet above mean sea level
COS75A ⊗	Extraction Water Well Location and Identifier
COS74 ○	Production Water Well Location and Identifier
SRP22.5E, 6N ⦶	Inactive Production Water Well Location and Identifier

NORTH INDIAN BEND WASH AREA
MARICOPA COUNTY, ARIZONA

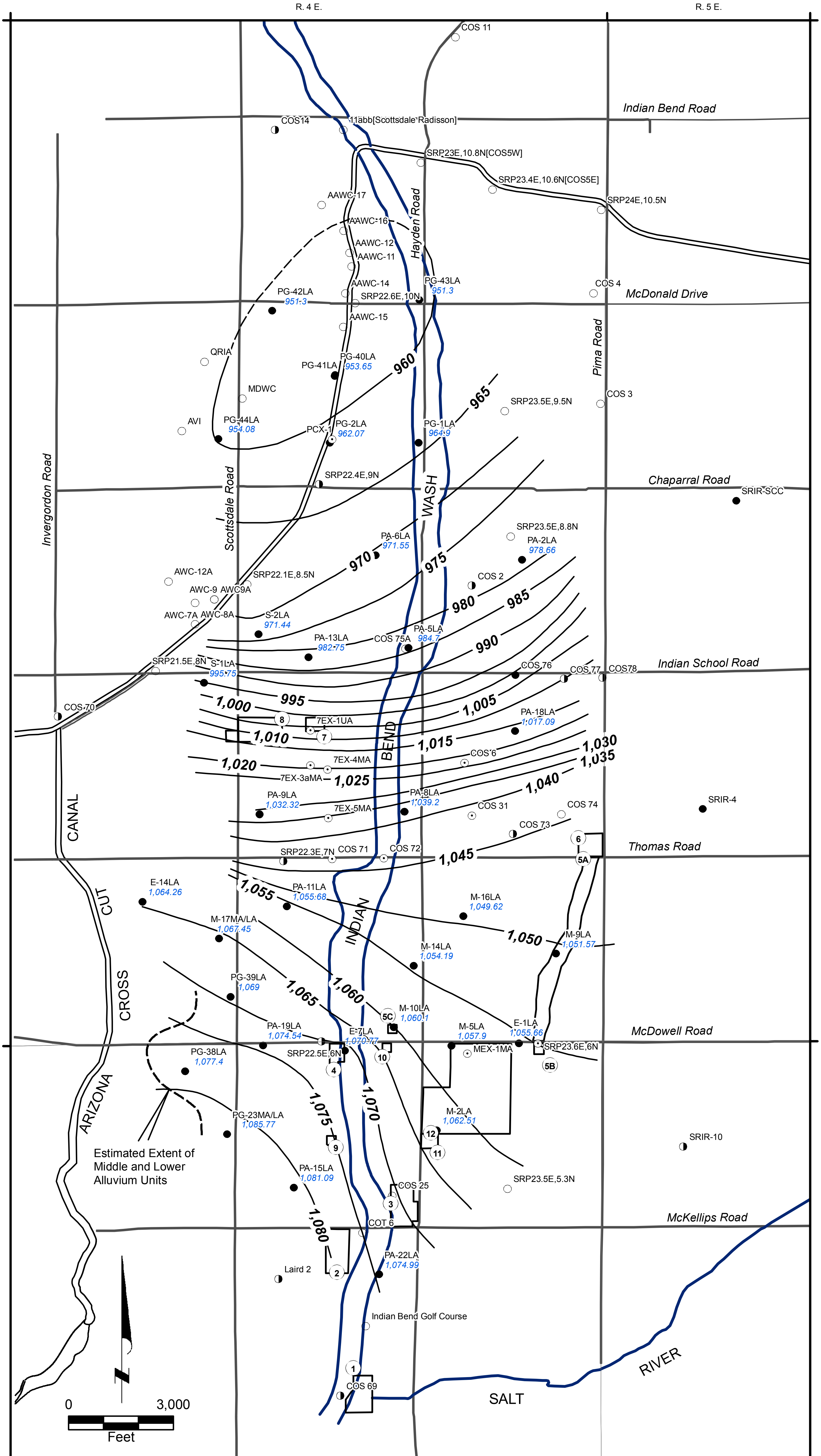
GROUNDWATER LEVEL CONTOURS
MIDDLE ALLUVIUM UNIT WELLS
APRIL 2007

North Indian Bend Wash Superfund Site

2008

FIGURE 3

GIS-TUC\366.1402\MAU_WLApr2007.mxd\26Feb2008



EXPLANATION

PA-15LA ● Lower Alluvium Monitor Well Location and Identifier

1,081.09 Groundwater Level Altitude, in feet above mean sea level

COS75A ⊗ Extraction Water Well Location and Identifier

COS74 ○ Production Water Well Location and Identifier

SRP22.5E, 6N ⦶ Inactive Production Water Well Location and Identifier

NORTH INDIAN BEND WASH AREA
MARICOPA COUNTY, ARIZONA

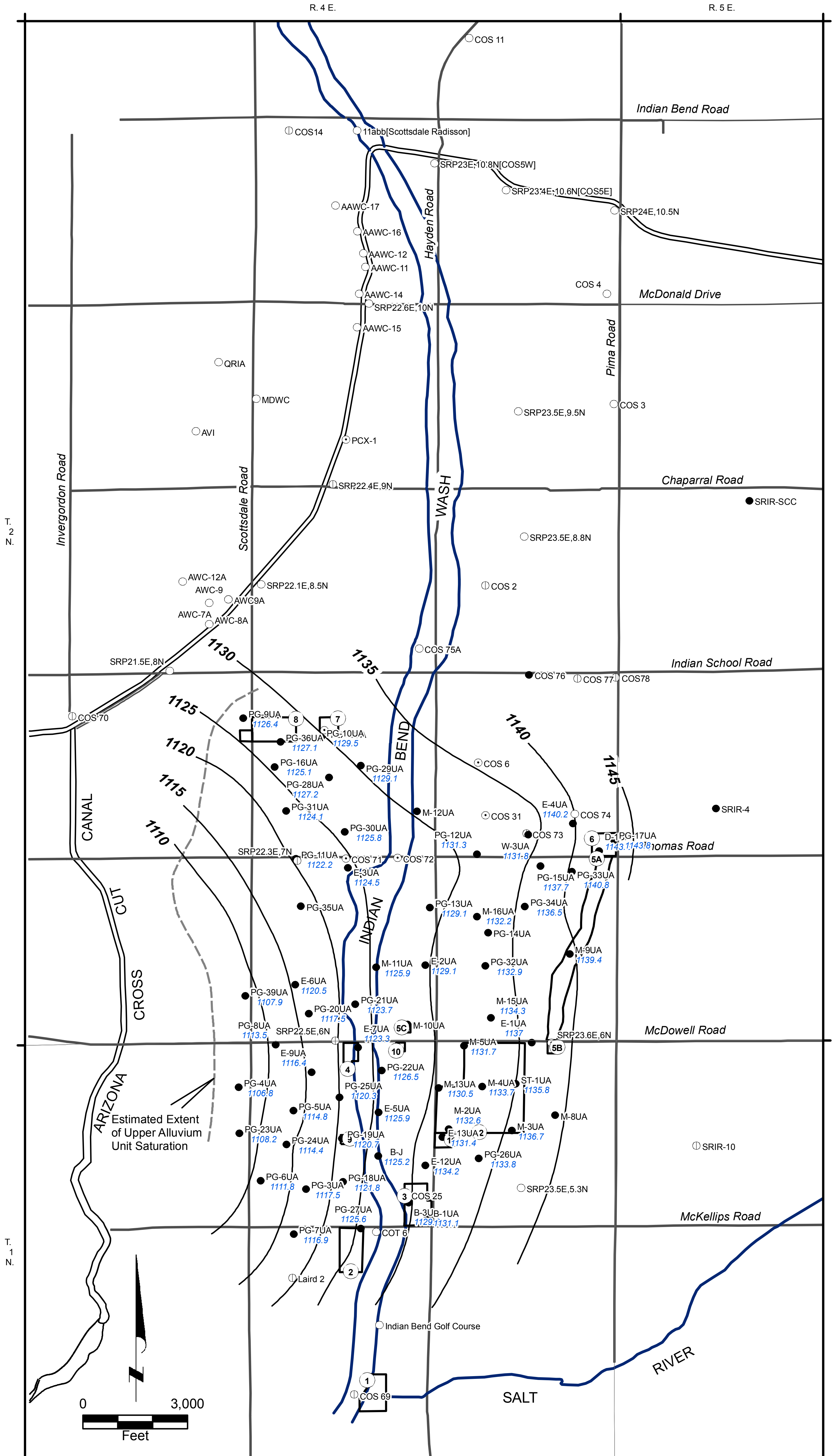
GROUNDWATER LEVEL CONTOURS
LOWER ALLUVIUM UNIT WELLS
APRIL 2007

North Indian Bend Wash Superfund Site

2008

FIGURE 4

GIS-TUC\366.1402\WaterLevel\2007\LAU_Apr2007.mxd\25Feb2008



EXPLANATION

PG-4UA ● Upper Alluvium Monitor Well Location and Identifier

1106.8 Groundwater Level Altitude, in feet above mean sea level

COS75A ⊗ Extraction Water Well Location and Identifier

COS74 ○ Production Water Well Location and Identifier

SRP22.5E, 6N ⦶ Inactive Production Water Well Location and Identifier

NORTH INDIAN BEND WASH AREA

MARICOPA COUNTY, ARIZONA

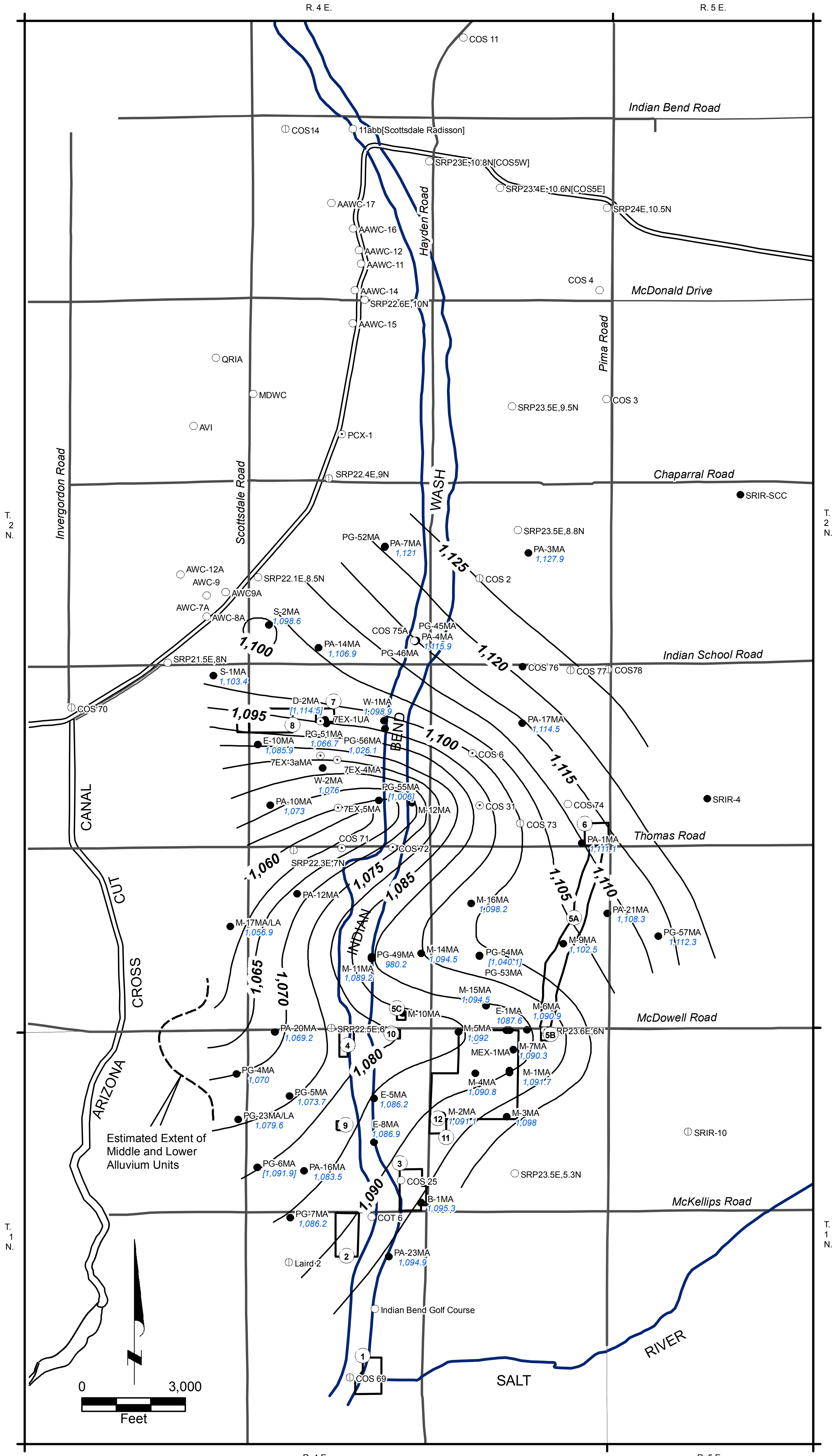
GROUNDWATER LEVEL CONTOURS
UPPER ALLUVIUM UNIT WELLS
OCTOBER 2007

North Indian Bend Wash Superfund Site

2008

FIGURE 5

GIS-TUC\366.1402\WaterLevel\2007\UAU_WLOct2007.mxd\27Feb2008



EXPLANATION

PG-6MA ● Middle Alluvium Monitor Well Location and Identifier

1,091.9 Groundwater Level Altitude, in feet above mean sea level

COS75A ⊗ Extraction Water Well Location and Identifier

COS74 ○ Production Water Well Location and Identifier

SRP22.5E, 6N ⦶ Inactive Production Water Well Location and Identifier

NORTH INDIAN BEND WASH AREA

MARICOPA COUNTY, ARIZONA

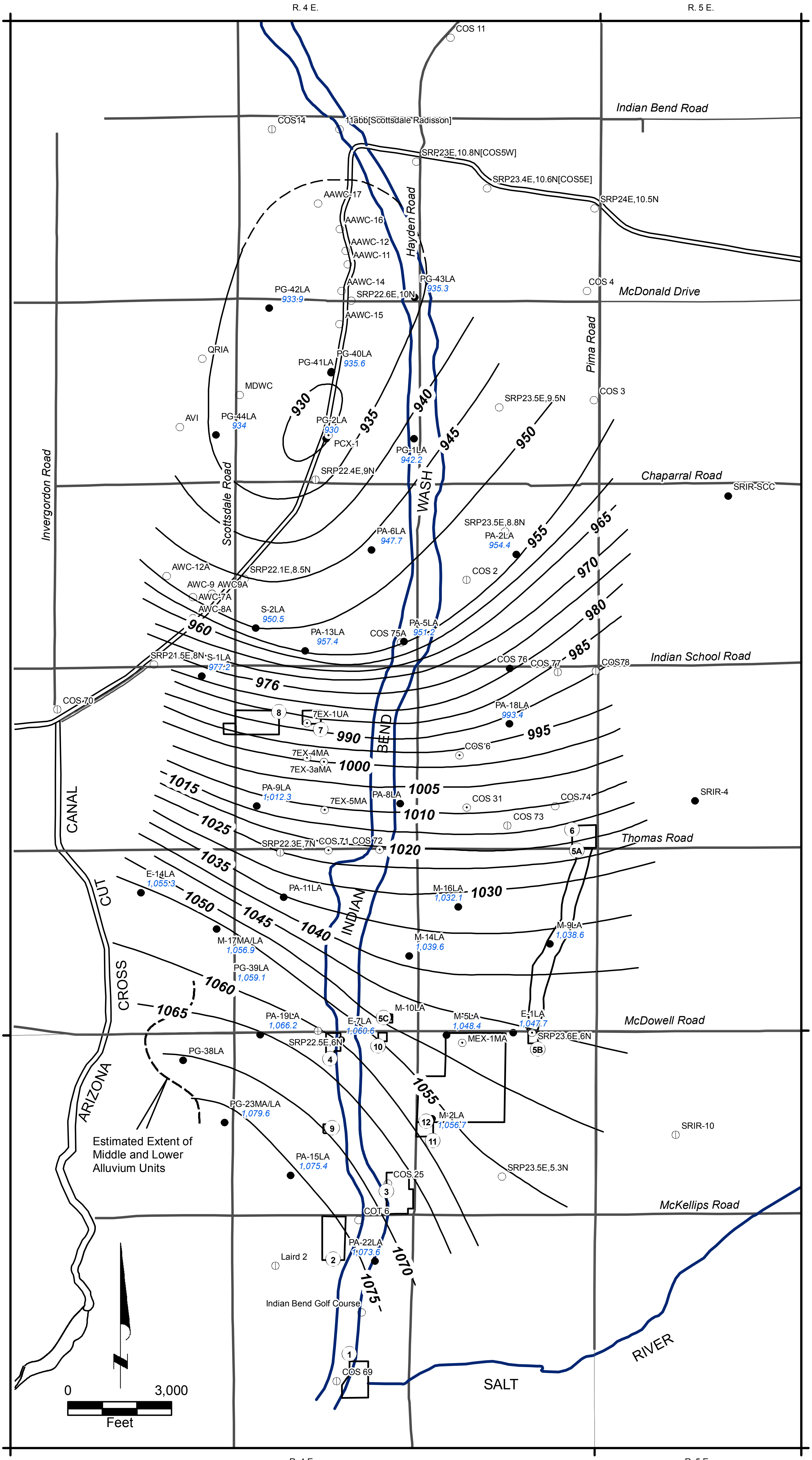
GROUNDWATER LEVEL CONTOURS
MIDDLE ALLUVIUM UNIT WELLS
OCTOBER 2007

North Indian Bend Wash Superfund Site

2008

FIGURE 6

GIS-TUC\366.1402\2007\WaterLevel\MAU_WLOct2007.mxd\27Feb2008



EXPLANATION

PA-15LA ● Lower Alluvium Monitor Well Location and Identifier

1,075.4 Groundwater Level Altitude, in feet above mean sea level

COS75A ⊗ Extraction Water Well Location and Identifier

COS74 ○ Production Water Well Location and Identifier

SRP22.5E, 6N ⦶ Inactive Production Water Well Location and Identifier

NORTH INDIAN BEND WASH AREA
MARICOPA COUNTY, ARIZONA

GROUNDWATER LEVEL CONTOURS
LOWER ALLUVIUM UNIT WELLS
OCTOBER 2007

North Indian Bend Wash Superfund Site

2008

FIGURE 7

GIS-TUC\366.1402\WaterLevel\2007\LAU_Oct2007.mxd\27Feb2008

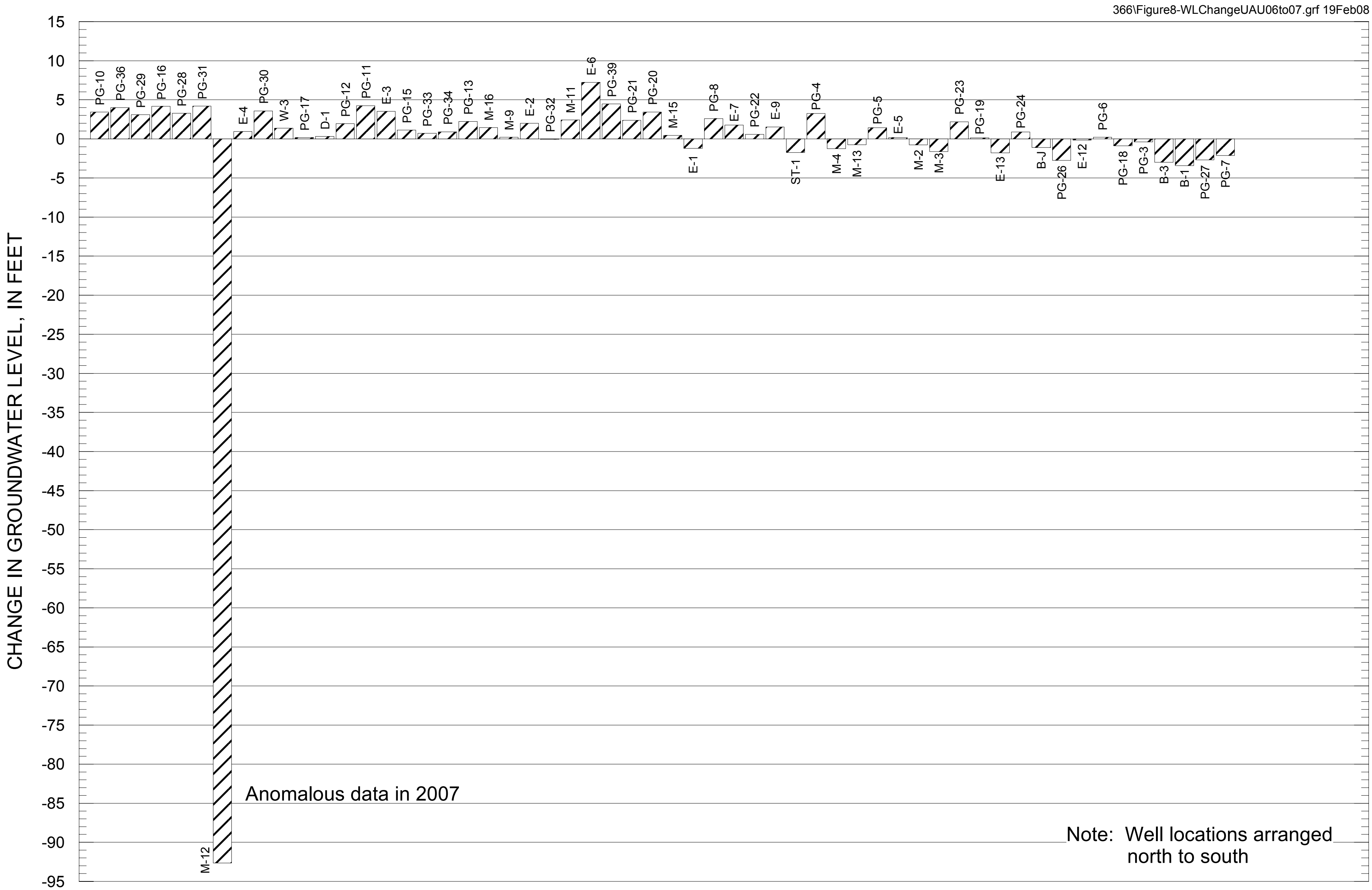


FIGURE 8. CHANGE IN UPPER ALLUVIUM UNIT GROUNDWATER LEVEL, OCTOBER 2006 TO OCTOBER 2007

North Indian Bend Wash Superfund Site

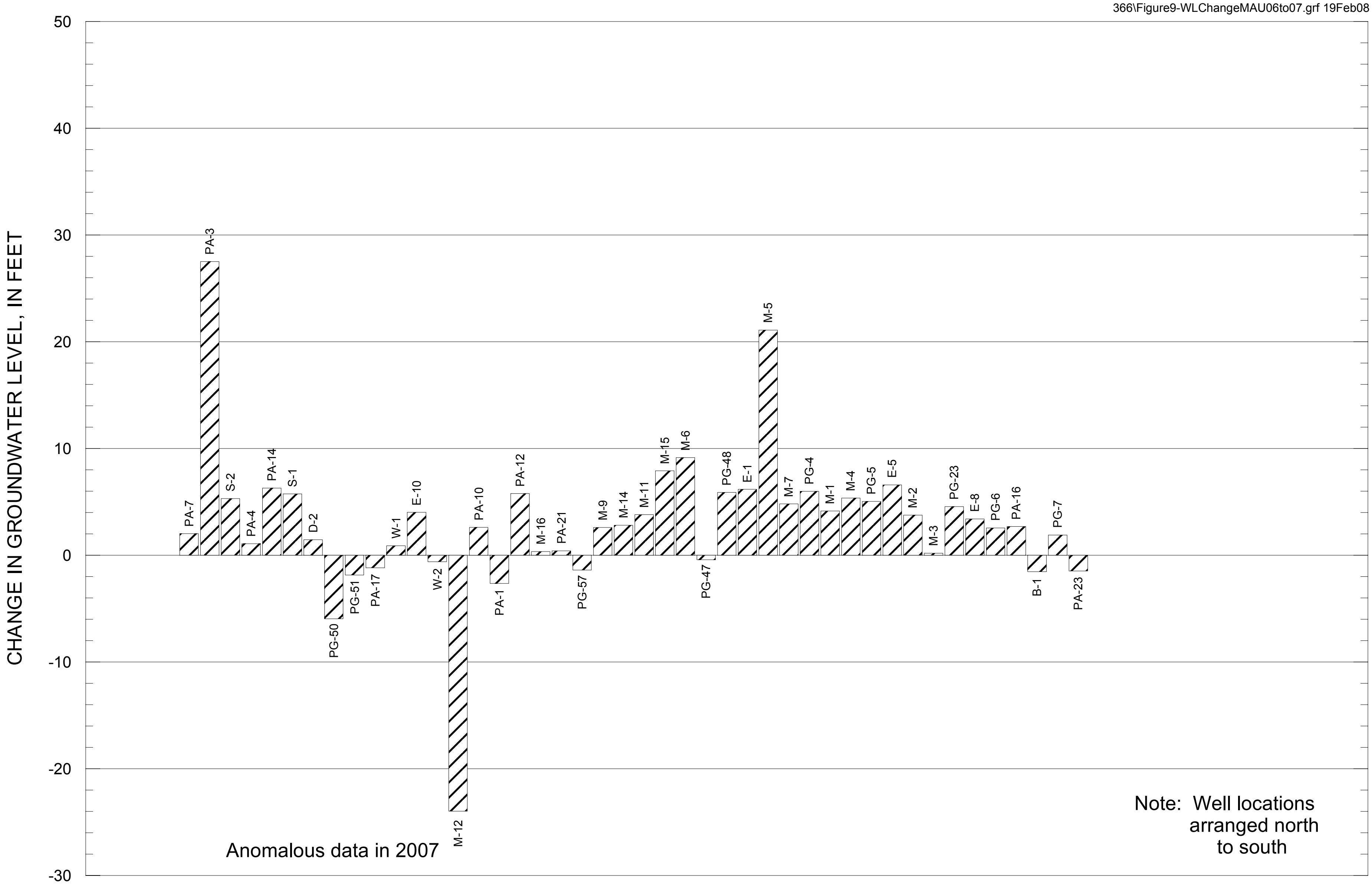


FIGURE 9. CHANGE IN MIDDLE ALLUVIUM UNIT GROUNDWATER LEVEL, OCTOBER 2006 TO OCTOBER 2007

North Indian Bend Wash Superfund Site

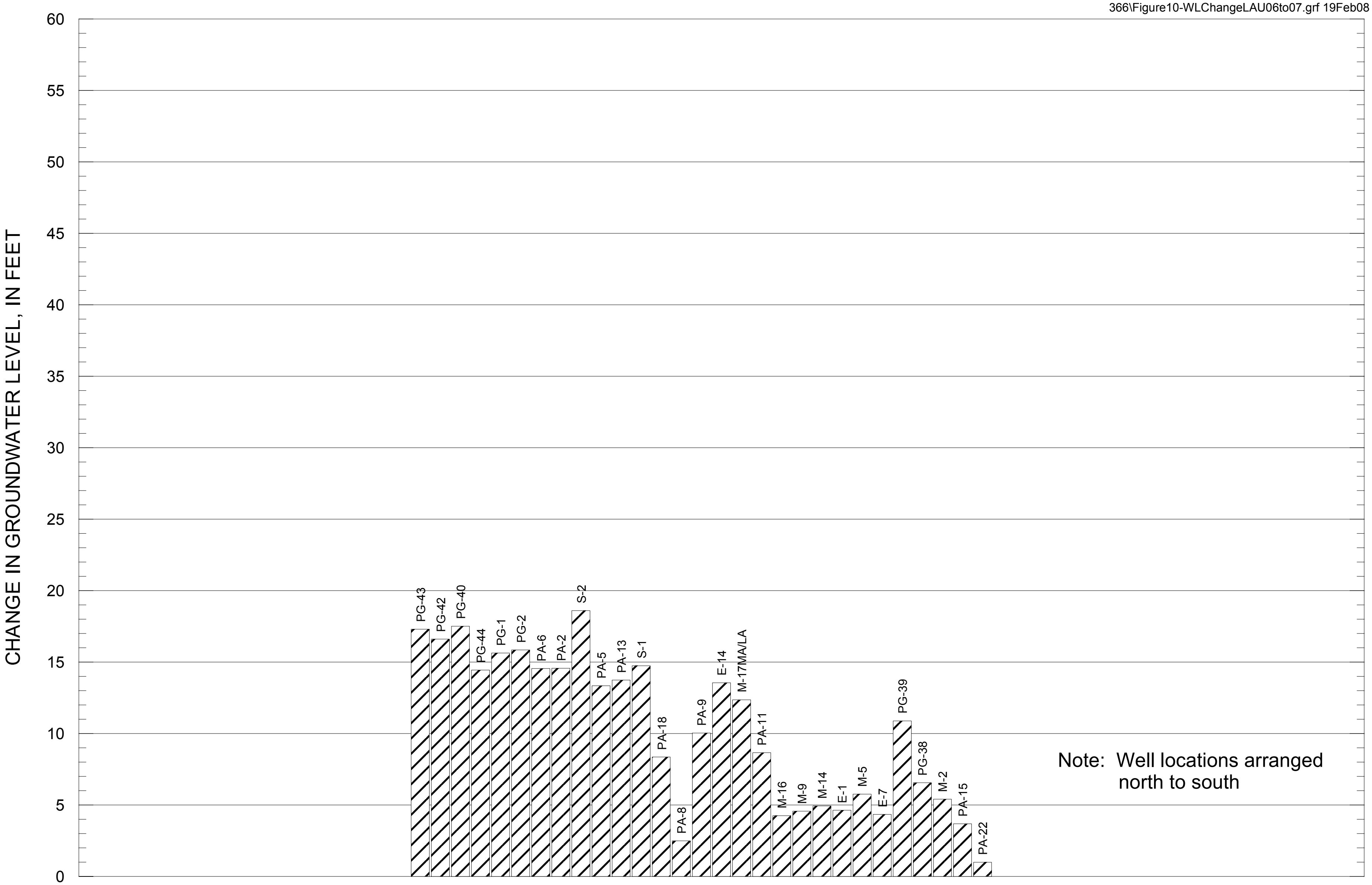
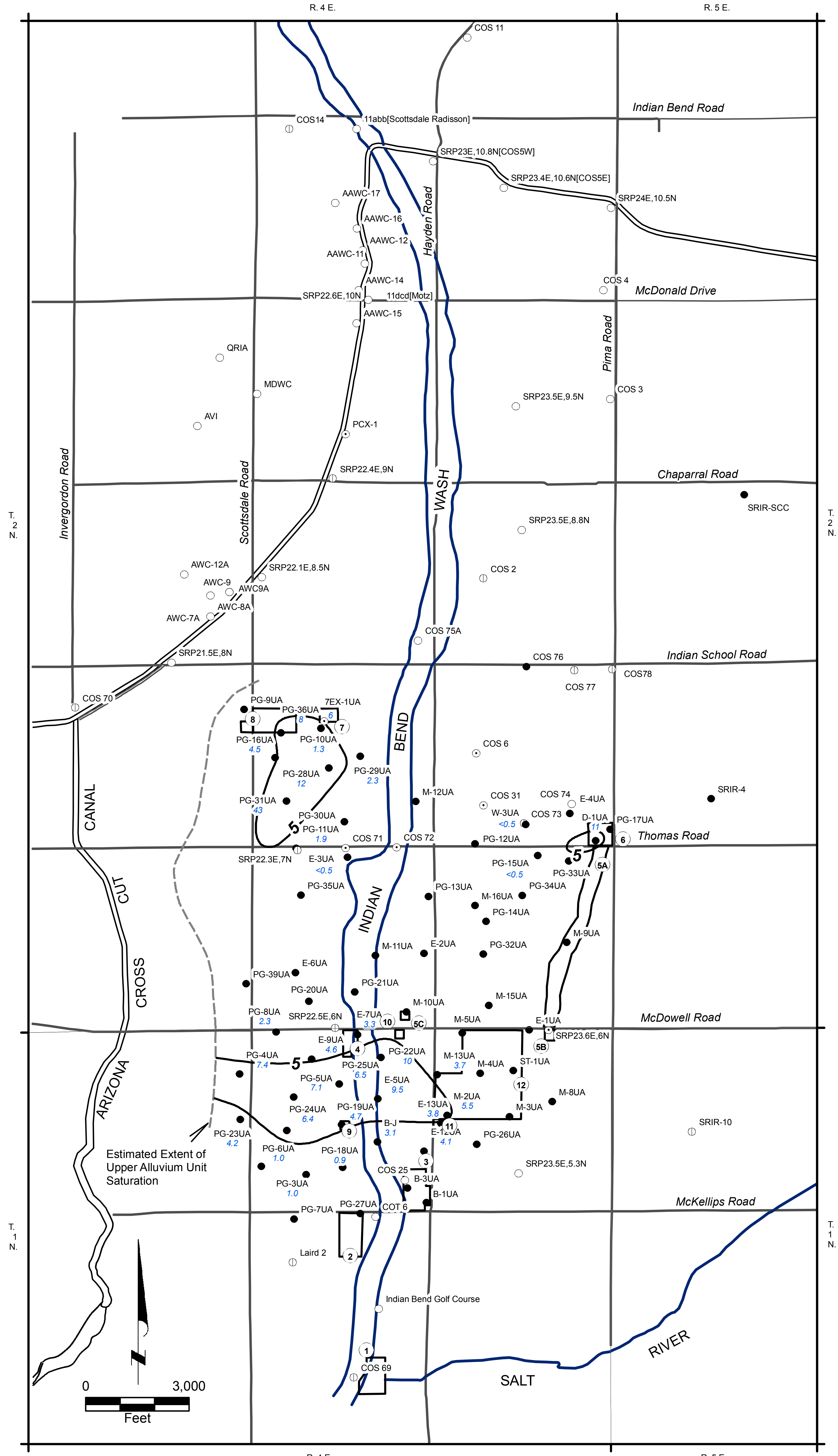


FIGURE 10. CHANGE IN LOWER ALLUVIUM UNIT GROUNDWATER LEVEL, OCTOBER 2006 TO OCTOBER 2007



EXPLANATION

PG-4UA ●	Upper Alluvium Monitor Well Location and Identifier
7.4	Concentration of TCE, micrograms per liter
COS75A ⊗	Extraction Water Well Location and Identifier
COS74 ○	Production Water Well Location and Identifier
SRP22.5E, 6N ⦶	Inactive Production Water Well Location and Identifier

NORTH INDIAN BEND WASH AREA
MARICOPA COUNTY, ARIZONA

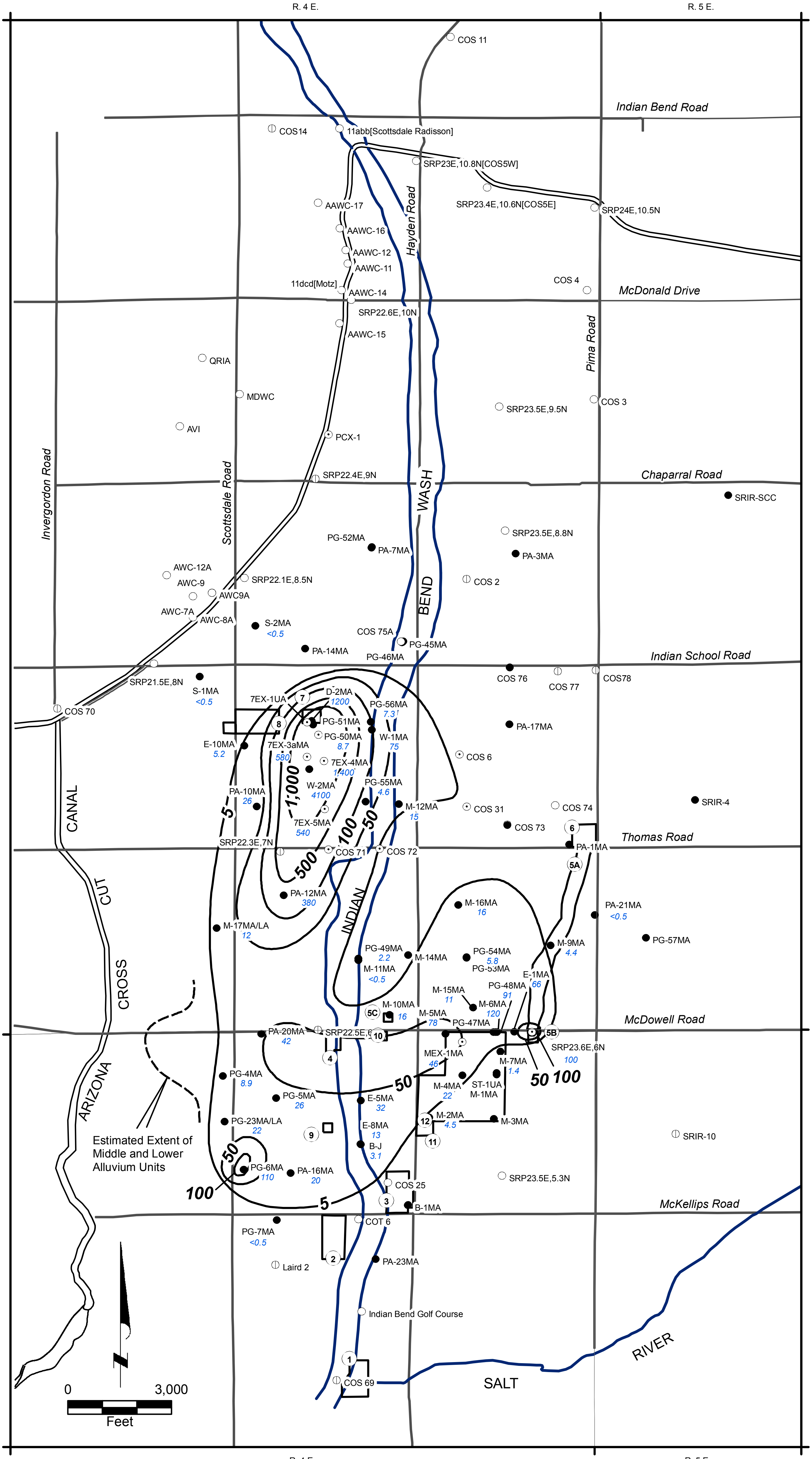
CONCENTRATION OF TCE IN
UPPER ALLUVIUM UNIT WELLS
OCTOBER 2007

North Indian Bend Wash Superfund Site

2008

FIGURE 11

GIS-TUC\366.1402\UAU_TCE_Oct2007.mxd\28Feb2008



EXPLANATION

PG-6MA ● 110	Middle Alluvium Monitor Well Location and Identifier; Concentration of TCE, micrograms per liter
COS75A ⊗	Extraction Water Well Location and Identifier
COS74 ○	Production Water Well Location and Identifier
SRP22.5E, 6N ⦶	Inactive Production Water Well Location and Identifier

NORTH INDIAN BEND WASH AREA
MARICOPA COUNTY, ARIZONA

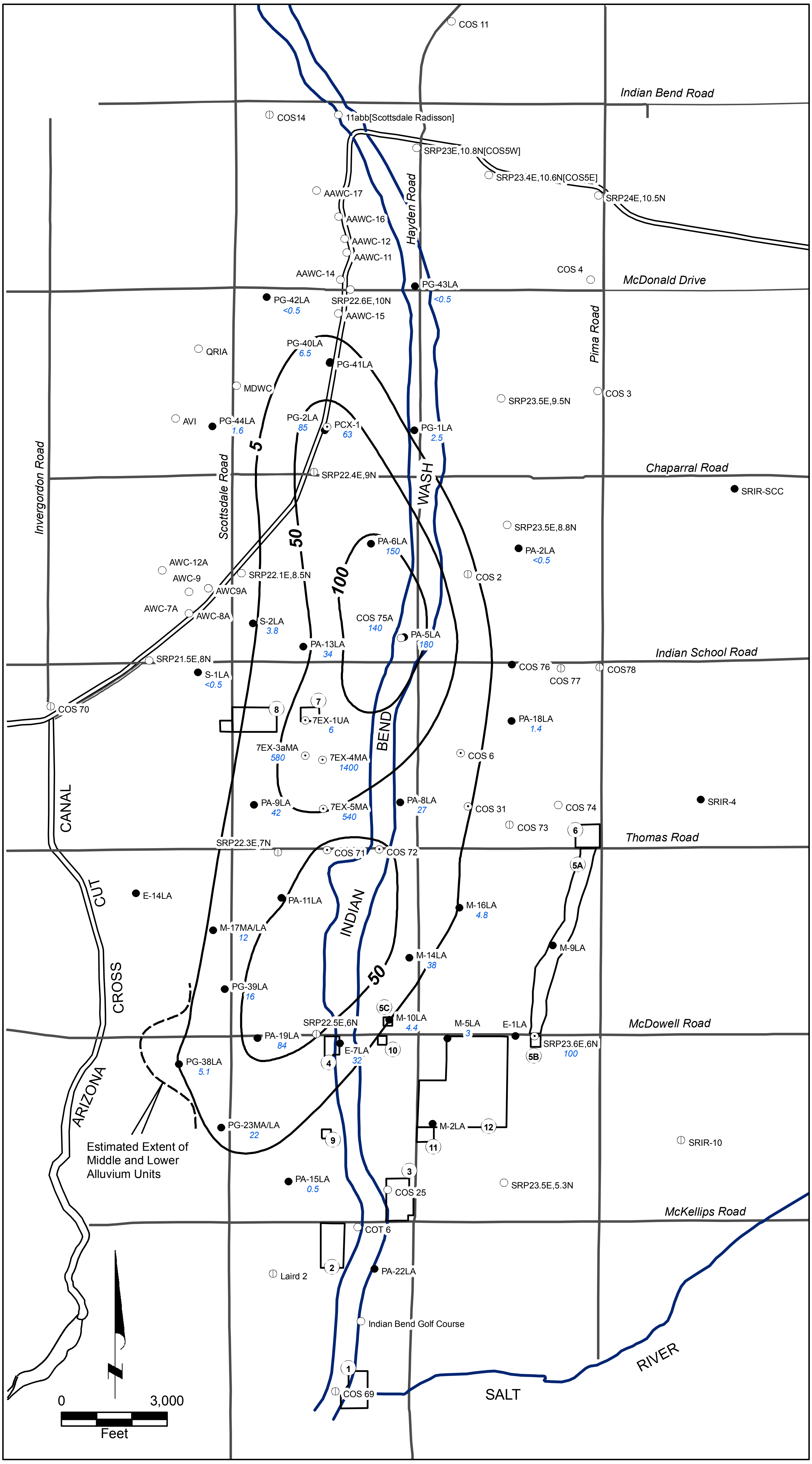
CONCENTRATION OF TCE IN MIDDLE ALLUVIUM UNIT WELLS OCTOBER 2007

North Indian Bend Wash Superfund Site

2008

FIGURE 12

GIS-TUC\366.1402\MAU_TCE_Oct2007.mxd\28Feb2008



EXPLANATION

PA-15LA ●	Lower Alluvium Monitor Well Location and Identifier
0.5	Concentration of TCE, micrograms per liter
COS75A ⊗	Extraction Water Well Location and Identifier
COS74 ○	Production Water Well Location and Identifier
SRP22.5E, 6N ⦶	Inactive Production Water Well Location and Identifier

NORTH INDIAN BEND WASH AREA
MARICOPA COUNTY, ARIZONA

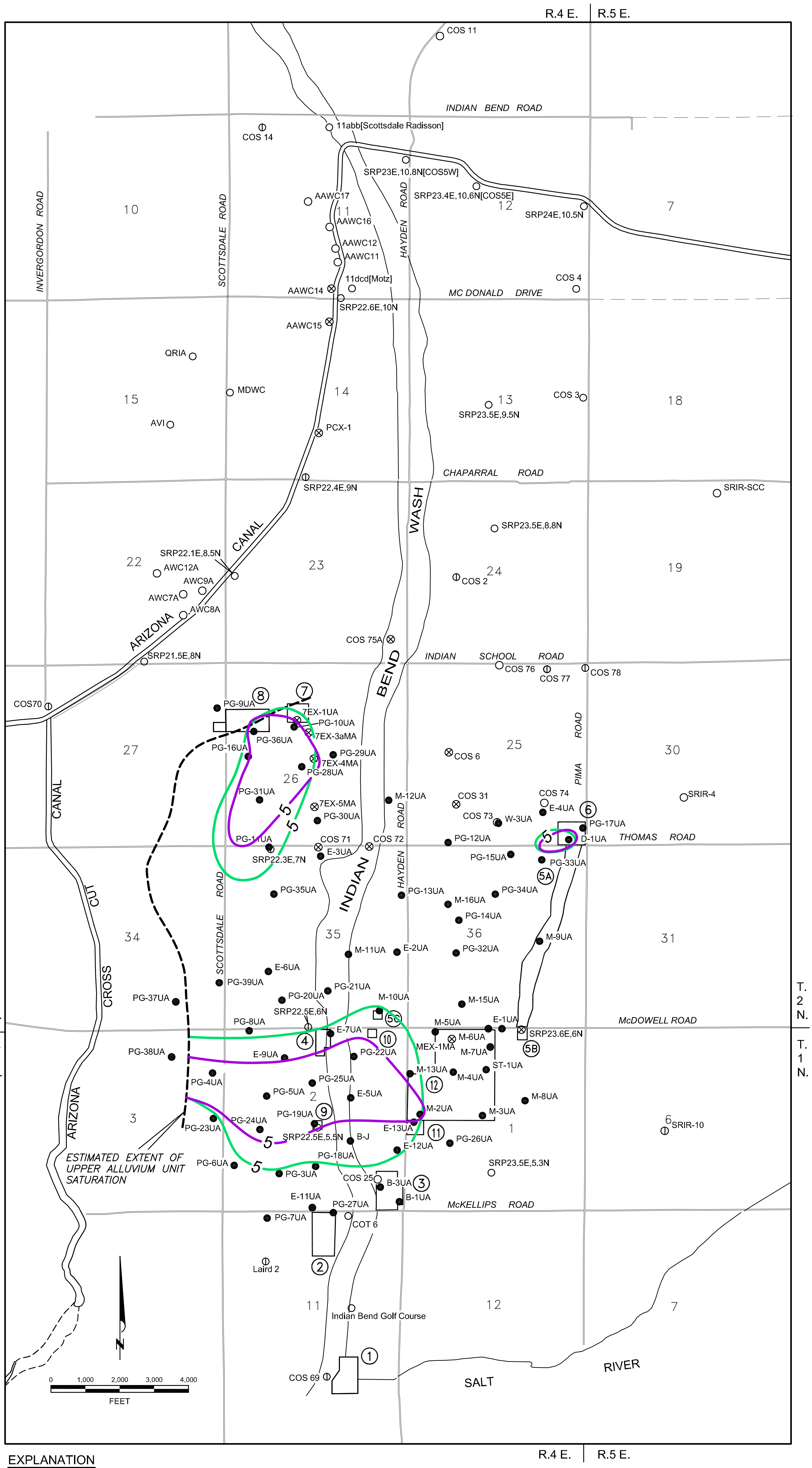
CONCENTRATION OF TCE IN
LOWER ALLUVIUM UNIT WELLS
OCTOBER 2007

North Indian Bend Wash Superfund Site

2008

FIGURE 13

GIS-TUC\366.1402\LAU_TCE_Oct2007mxd\25Feb2008



EXPLANATION

M-2UA	UPPER ALLUVIUM UNIT MONITOR WELL LOCATION AND IDENTIFIER
COS75A	EXTRACTION WATER WELL LOCATION AND IDENTIFIER
COS74	PRODUCTION WATER WELL LOCATION AND IDENTIFIER
SRP22.5E,6N	INACTIVE PRODUCTION WATER WELL LOCATION AND IDENTIFIER
5	TCE CONCENTRATION CONTOUR, in micrograms per liter (October 2001)
5	TCE CONCENTRATION CONTOUR, in micrograms per liter (October 2007)

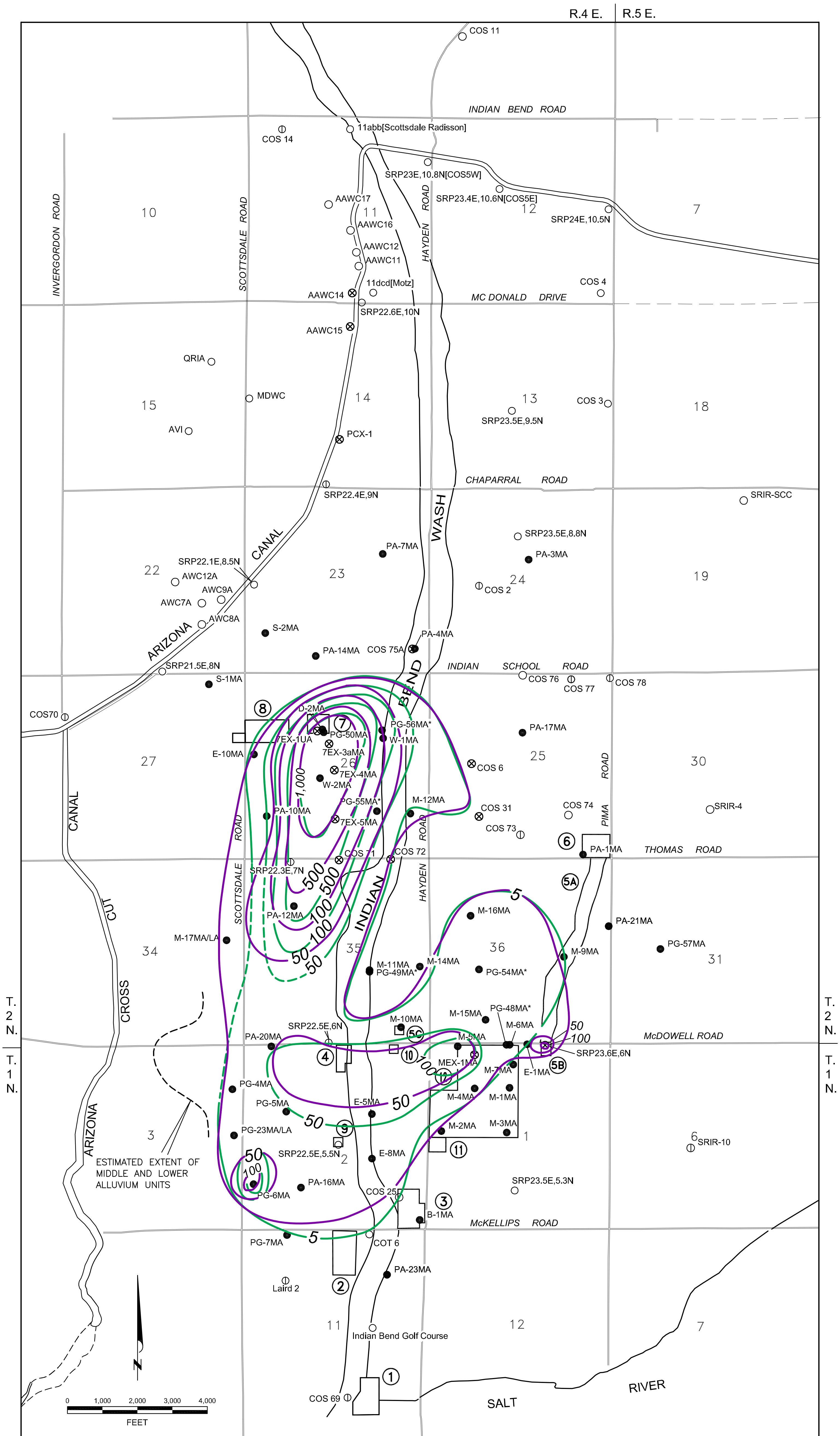
366.20\TCE-2006\UTCE-10-2001-2007\25Feb2008

NORTH INDIAN BEND WASH AREA
MARICOPA COUNTY, ARIZONA

CONCENTRATION OF TCE IN UPPER ALLUVIUM UNIT WELLS OCTOBER 2001-OCTOBER 2007

North Indian Bend Wash Superfund Site 2008

FIGURE 14



EXPLANATION

● PG-6MA	MIDDLE ALLUVIUM UNIT MONITOR WELL LOCATION AND IDENTIFIER * Indicates Lower Middle Alluvium Unit completion; TCE value not used for contouring
⊗ COS75A	EXTRACTION WATER WELL LOCATION AND IDENTIFIER
○ COS74	PRODUCTION WATER WELL LOCATION AND IDENTIFIER
⦶ SRP22.5E,6N	INACTIVE PRODUCTION WATER WELL LOCATION AND IDENTIFIER
—50— (green)	TCE CONCENTRATION CONTOUR, in micrograms per liter (October 2001) – – Indicates contour re-evaluated based on new data for well M-17MA/LA
—50— (purple)	TCE CONCENTRATION CONTOUR, in micrograms per liter (October 2007)

NORTH INDIAN BEND WASH AREA
MARICOPA COUNTY, ARIZONA

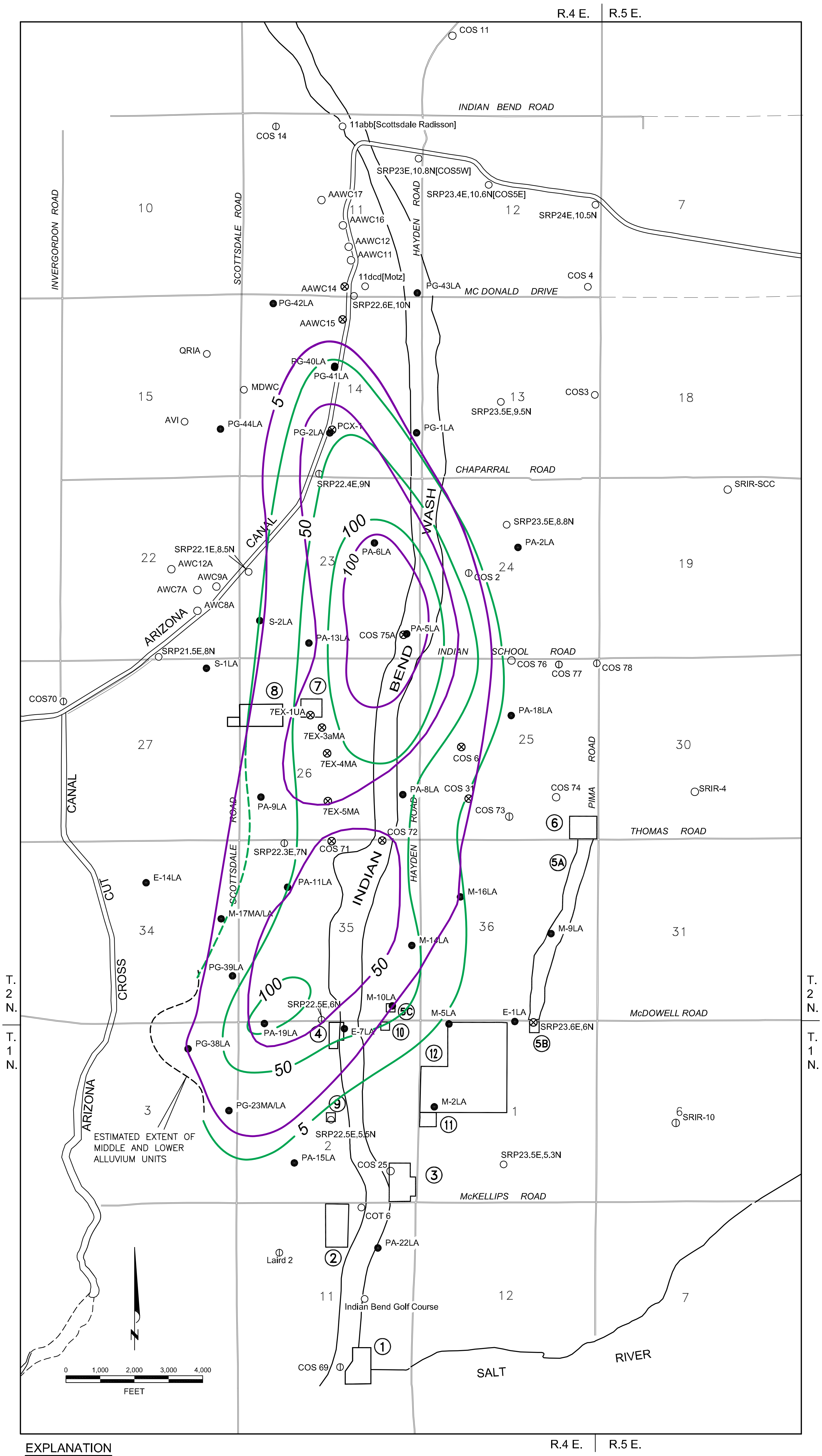
CONCENTRATION OF TCE IN MIDDLE ALLUVIUM UNIT WELLS OCTOBER 2001-OCTOBER 2007

2008

North Indian Bend Wash Superfund Site

FIGURE 15

366.1402\MTCE-10-2001-2007\28Feb2008



EXPLANATION

- ● M-14LA — LOWER ALLUVIUM UNIT MONITOR WELL LOCATION AND IDENTIFIER
- ⊗ COS75A — EXTRACTION WATER WELL LOCATION AND IDENTIFIER
- ○ COS74 — PRODUCTION WATER WELL LOCATION AND IDENTIFIER
- ⦶ SRP22.5E,6N — INACTIVE PRODUCTION WATER WELL LOCATION AND IDENTIFIER
- —50— (green) TCE CONCENTRATION CONTOUR, in micrograms per liter (October 2001)
- - - (green dashed) Indicates contour re-evaluated based on new data for well M-17MA/LA
- —50— (purple) TCE CONCENTRATION CONTOUR, in micrograms per liter (October 2007)

NORTH INDIAN BEND WASH AREA
MARICOPA COUNTY, ARIZONA

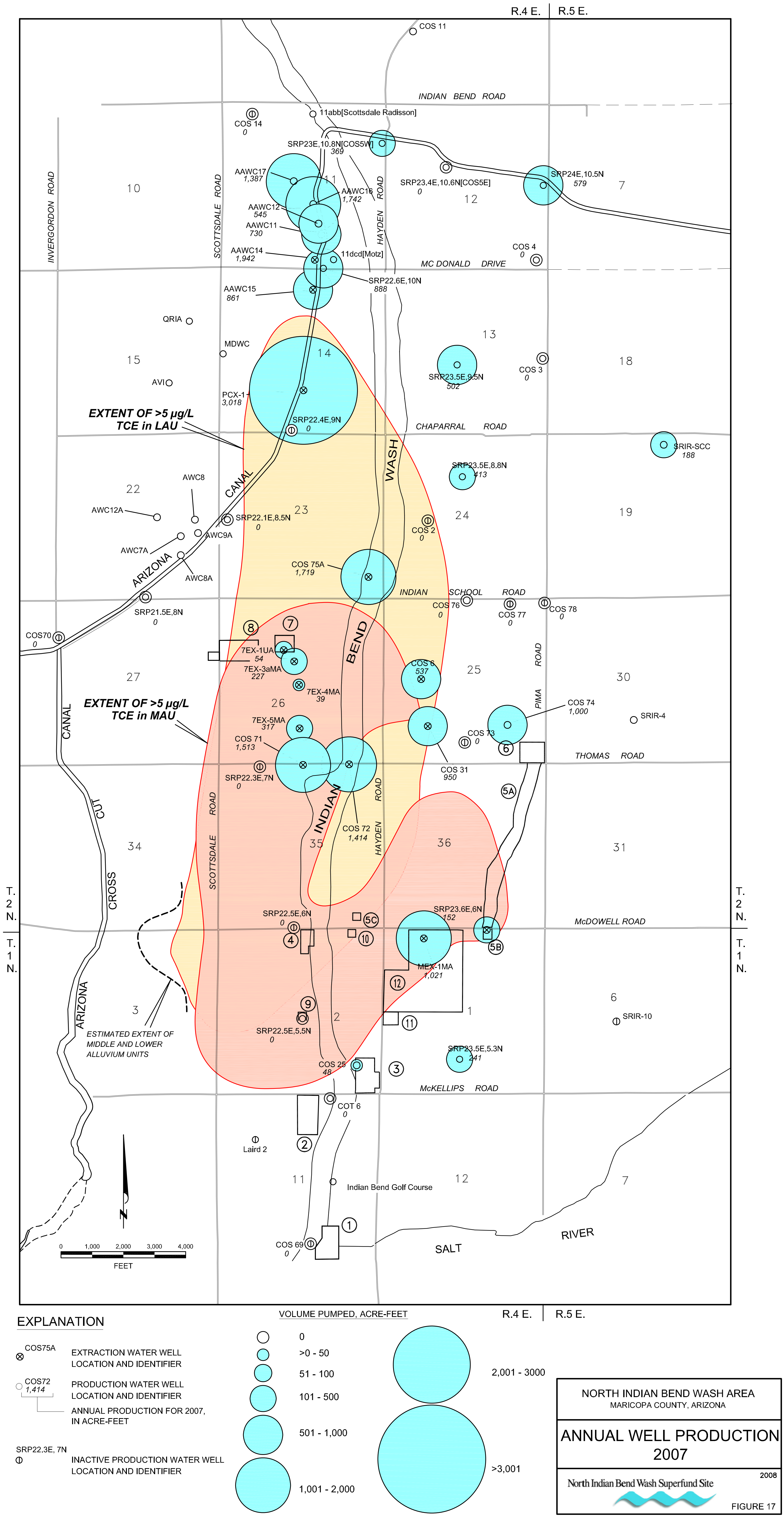
CONCENTRATION OF TCE IN LOWER ALLUVIUM UNIT WELLS OCTOBER 2001-OCTOBER 2007

North Indian Bend Wash Superfund Site

2008

FIGURE 16

366.1402\LTCE-10-2001-2007\28Feb2008


R.4 E.
R.5 E.
COS 11
INDIAN BEND ROAD
11abb[Scottsdale Radisson]
COS 14
0
SRP23E,10.8N[COS5W]
369
AAWC17
1,387
AAWC16
1,742
AAWC12
545
AAWC11
730
AAWC14
1,942
11dcd[Motz]
SRP22.6E,10N
888
AAWC15
861
SRP23.4E,10.6N[COS5E]
0
SRP24E,10.5N
579
COS 4
0
MC DONALD DRIVE
INVERGORDON ROAD
SCOTTSDALE ROAD
HAYDEN ROAD
QRIA
MDWC
AVI
PCX-1
3,018
SRP22.4E,9N
0
SRP23.5E,9.5N
502
COS 3
0
CHAPARRAL ROAD
EXTENT OF >5 µg/L
TCE in LAU
SRIR-SCC
188
SRP23.5E,8.8N
413
WASH
AWC8
AWC12A
SRP22.1E,8.5N
0
AWC9A
AWC7A
AWC8A
CANAL
ARIZONA
COS 2
0
COS 75A
1,719
INDIAN SCHOOL ROAD
SRP21.5E,8N
0
COS70
0
COS 76
0
COS 77
0
COS 78
0
7EX-1UA
54
7EX-3aMA
227
7EX-4MA
39
BEND
COS 6
537
PIMA ROAD
EXTENT OF >5 µg/L
TCE in MAU
7EX-5MA
317
COS 71
1,513
COS 74
1,000
SRIR-4
COS 73
0
COS 31
950
THOMAS ROAD
SRP22.3E,7N
0
INDIAN
COS 72
1,414
CUT
CROSS
CANAL
SRP22.5E,6N
0
SRP23.6E,6N
152
McDOWELL ROAD
MEX-1MA
1,021
ESTIMATED EXTENT OF
MIDDLE AND LOWER
ALLUVIUM UNITS
SRP22.5E,5.5N
0
SRIR-10
SRP23.5E,5.3N
241
COS 25
48
McKELLIPS ROAD
COT 6
0
Laird 2
Indian Bend Golf Course
COS 69
0
SALT
RIVER
T. 2 N.
T. 1 N.
0 1,000 2,000 3,000 4,000
FEET
EXPLANATION
COS75A
EXTRACTION WATER WELL LOCATION AND IDENTIFIER
COS72
1,414
PRODUCTION WATER WELL LOCATION AND IDENTIFIER
ANNUAL PRODUCTION FOR 2007, IN ACRE-FEET
SRP22.3E, 7N
INACTIVE PRODUCTION WATER WELL LOCATION AND IDENTIFIER
VOLUME PUMPED, ACRE-FEET
0
>0 - 50
51 - 100
101 - 500
501 - 1,000
1,001 - 2,000
2,001 - 3000
>3,001
NORTH INDIAN BEND WASH AREA
MARICOPA COUNTY, ARIZONA
ANNUAL WELL PRODUCTION
2007
North Indian Bend Wash Superfund Site
2008
FIGURE 17
366.1402\2007-well production\26Feb2008

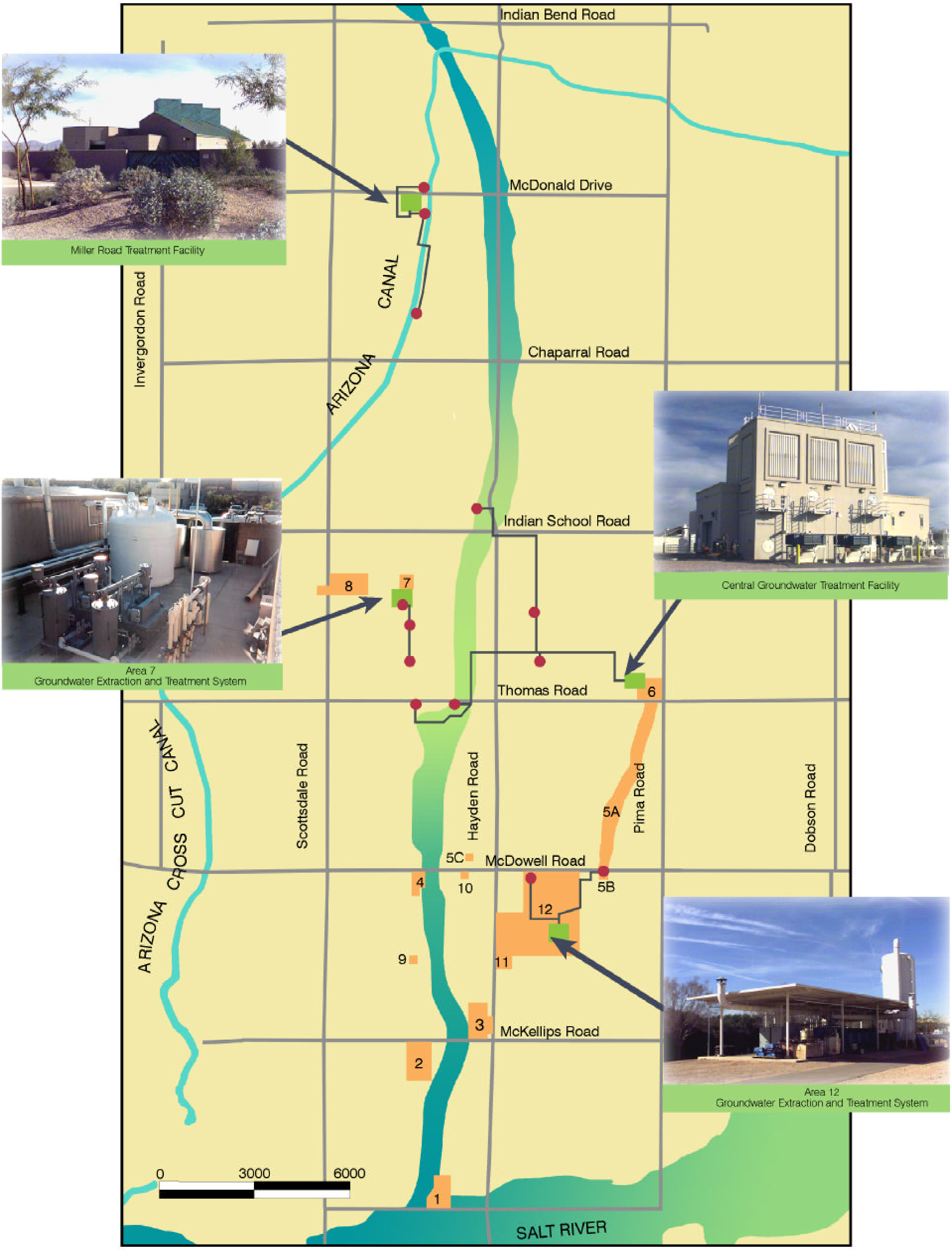
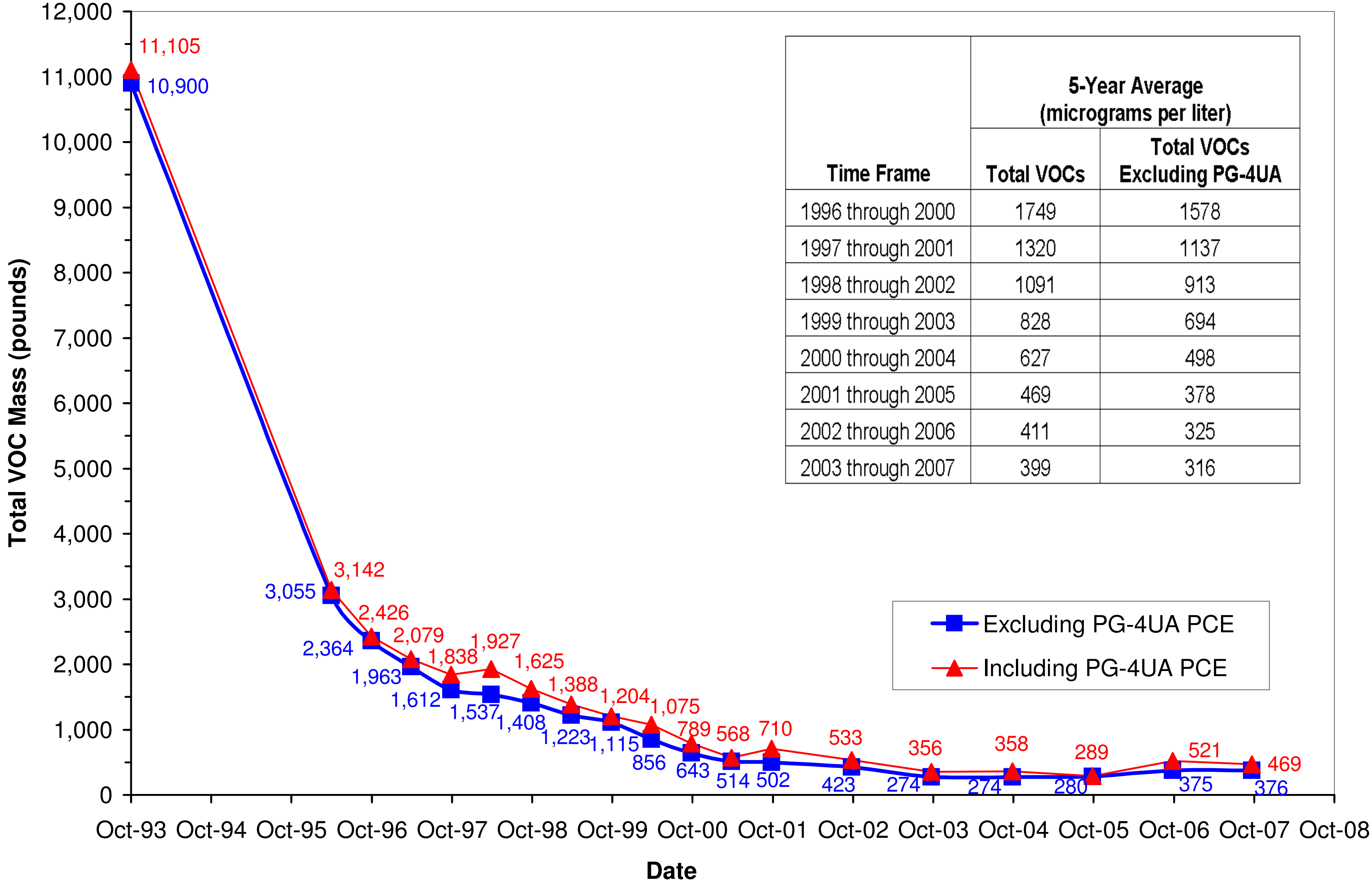
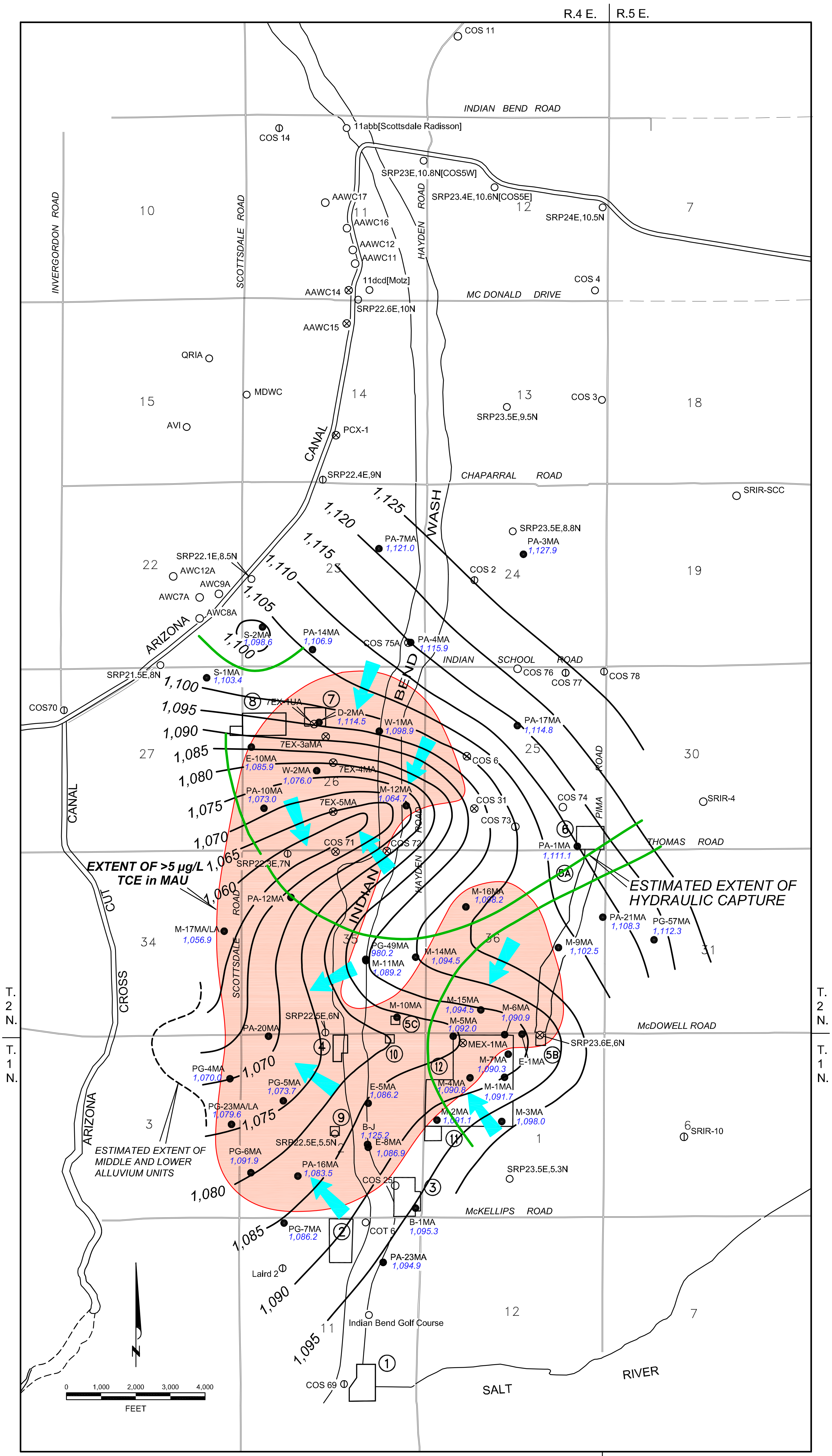


FIGURE 18. LOCATIONS FOR EXTRACTION WELLS, PIPELINES, AND TREATMENT FACILITIES, NIBW SUPERFUND SITE



Time Frame	5-Year Average (micrograms per liter)	
	Total VOCs	Total VOCs Excluding PG-4UA
1996 through 2000	1749	1578
1997 through 2001	1320	1137
1998 through 2002	1091	913
1999 through 2003	828	694
2000 through 2004	627	498
2001 through 2005	469	378
2002 through 2006	411	325
2003 through 2007	399	316

FIGURE 19. TOTAL MASS OF VOLATILE ORGANIC COMPOUNDS IN SATURATED PORTION OF UPPER ALLUVIUM UNIT



EXPLANATION

● PG-5MA 1,068.7	MIDDLE ALLUVIUM UNIT MONITOR WELL LOCATION AND IDENTIFIER
	GROUNDWATER LEVEL ALTITUDE, feet above mean sea level [ ] INDICATES ANOMALOUS DATA
⊗ COS75A	EXTRACTION WATER WELL LOCATION AND IDENTIFIER
○ COS74	PRODUCTION WATER WELL LOCATION AND IDENTIFIER
SRP22.5E,6N	INACTIVE PRODUCTION WATER WELL LOCATION AND IDENTIFIER
— 1,090 —	GROUNDWATER LEVEL ALTITUDE CONTOUR, feet above mean sea level
	DIRECTION OF GROUNDWATER MOVEMENT

366.20\wl-2007\MAU-wl Oct2007_TCE_capture27Feb2008 State Plane Nad83

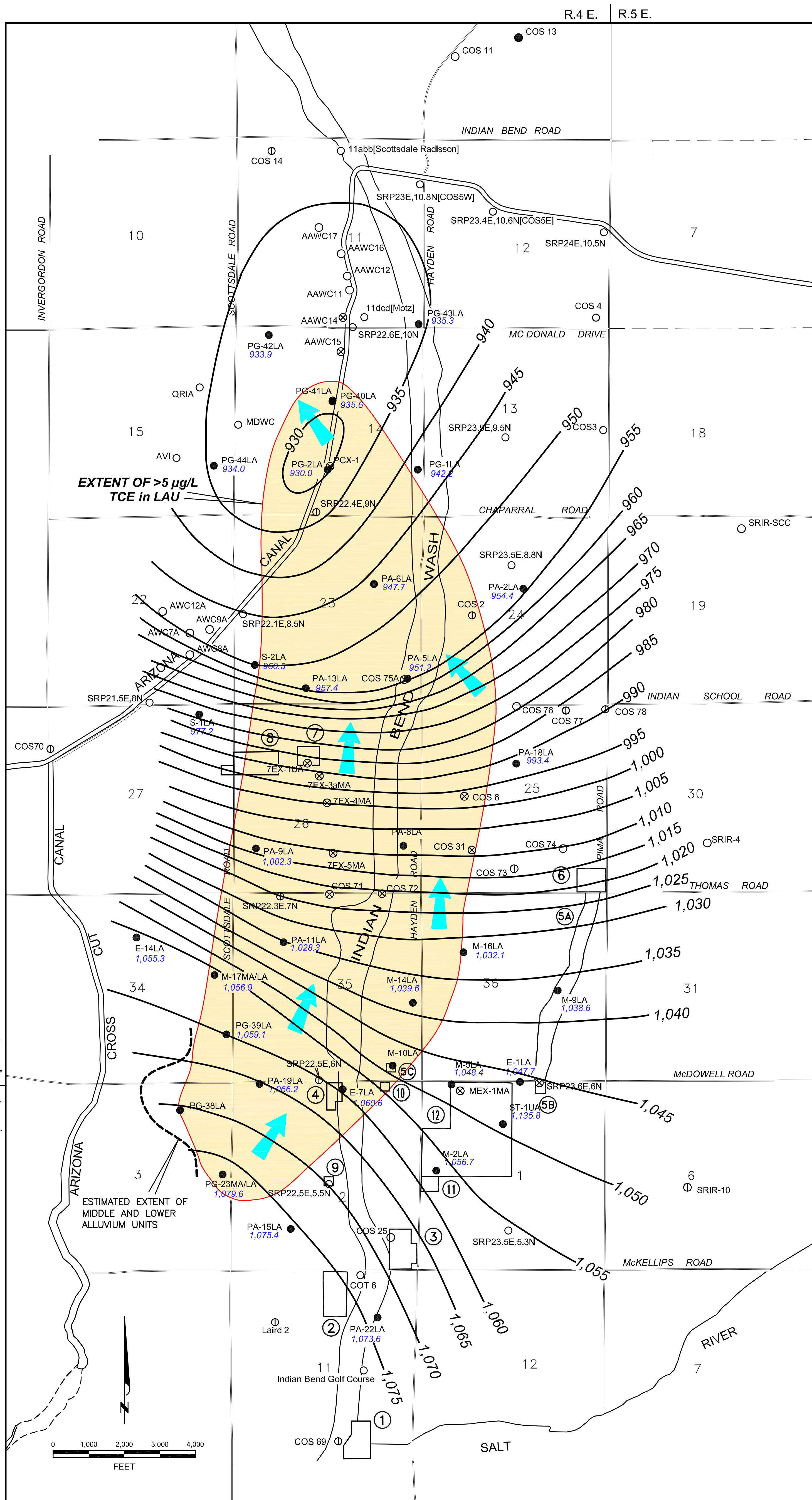
NORTH INDIAN BEND WASH AREA
MARICOPA COUNTY, ARIZONA

ESTIMATED HYDRAULIC CAPTURE ZONE OF MIDDLE ALLUVIUM UNIT CONTAMINATION, OCTOBER 2007

North Indian Bend Wash Superfund Site

2008

FIGURE 20



R.4 E. R.5 E.

EXPLANATION

- PA-15LA 1,075.4 — LOWER ALLUVIUM UNIT MONITOR WELL LOCATION AND IDENTIFIER; GROUNDWATER LEVEL ALTITUDE, feet above mean sea level
- ( ) Denotes adjusted water level based on change observed in adjacent wells
- COS75A — EXTRACTION WATER WELL LOCATION AND IDENTIFIER
- COS 74 — PRODUCTION WATER WELL LOCATION AND IDENTIFIER
- SRP22.5E,6N — INACTIVE PRODUCTION WATER WELL LOCATION AND IDENTIFIER
- 1,050 — GROUNDWATER LEVEL ALTITUDE CONTOUR, feet above mean sea level
- DIRECTION OF GROUNDWATER MOVEMENT

NORTH INDIAN BEND WASH AREA
MARICOPA COUNTY, ARIZONA

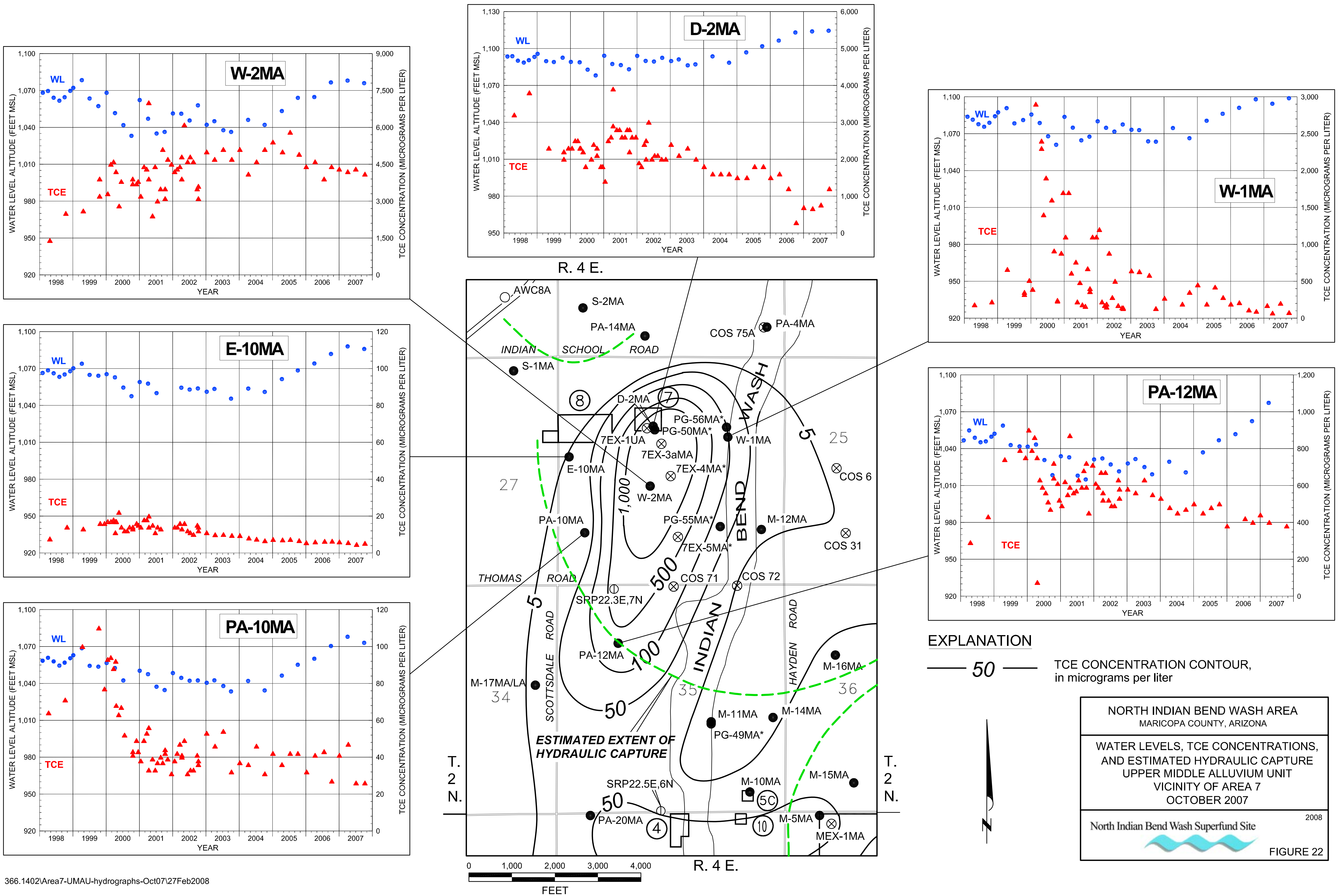
ESTIMATED CAPTURE ZONE OF LOWER ALLUVIUM UNIT CONTAMINATION, OCTOBER 2007

2008

North Indian Bend Wash Superfund Site

FIGURE 21

366.1402\LAU-wl-Oct2007_tce_CAPTURE\26Feb2008



366.1402\Area7-UMAU-hydrographs-Oct07\27Feb2008

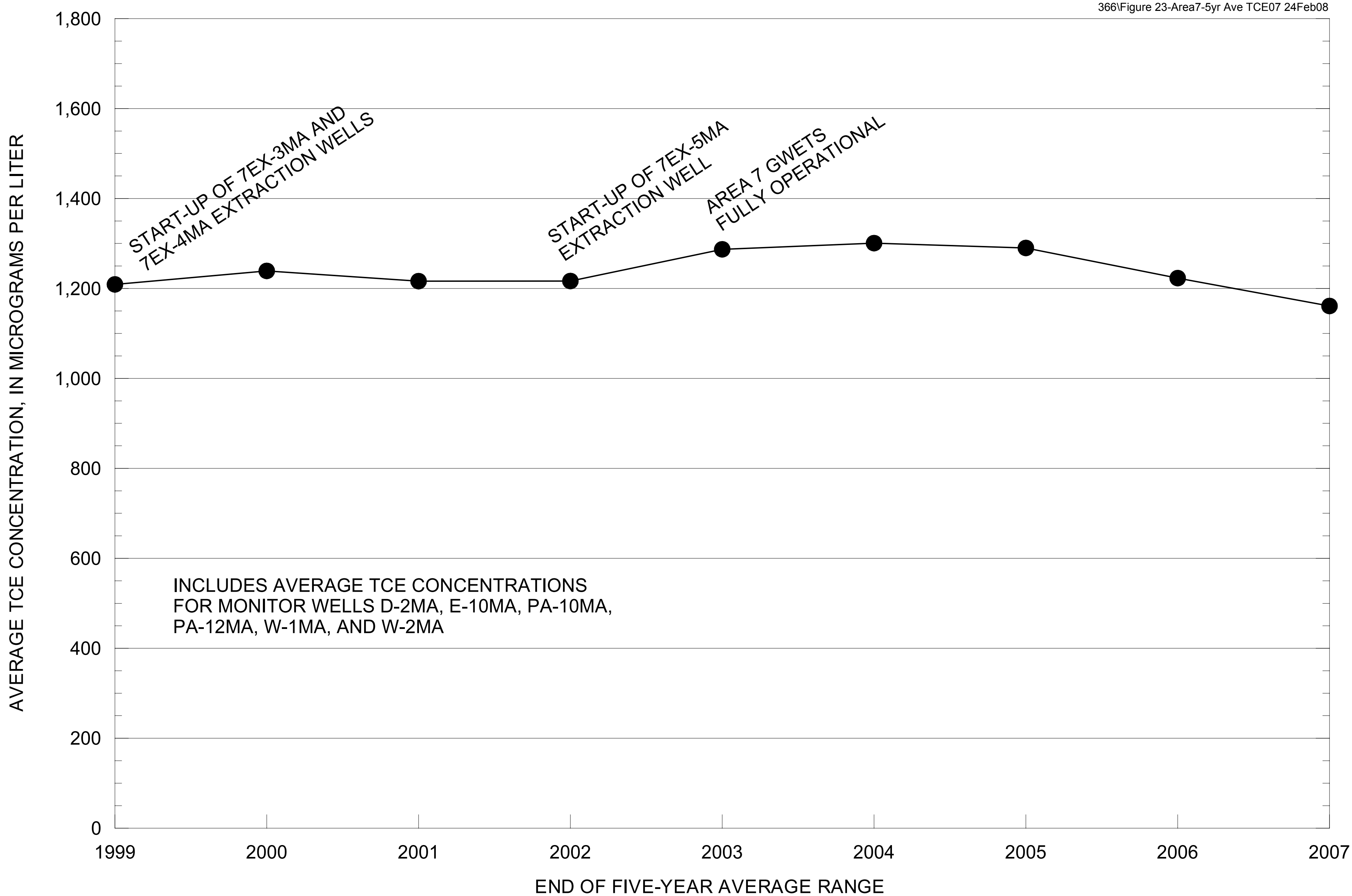
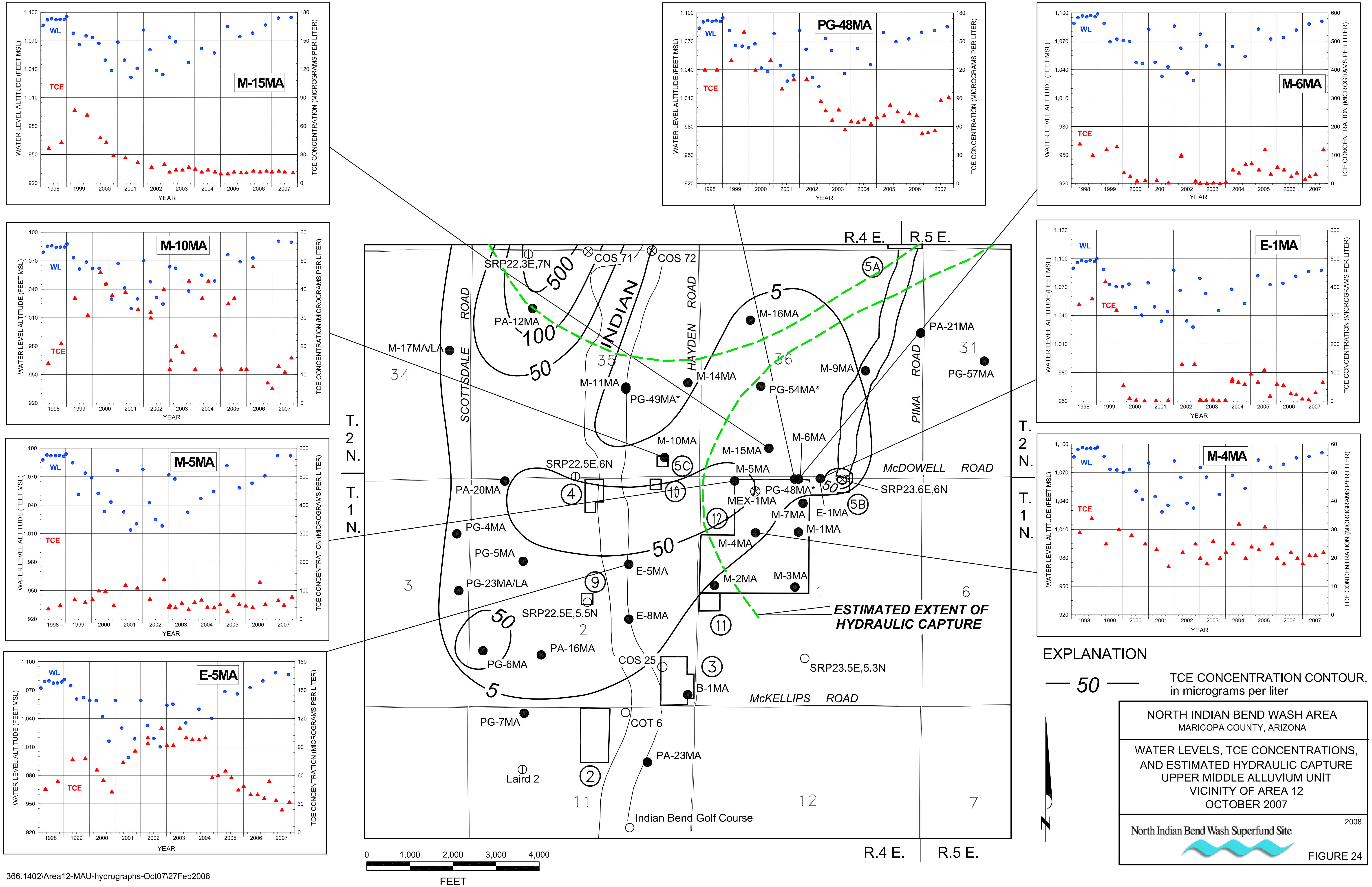


FIGURE 23. FIVE-YEAR RUNNING AVERAGE TCE CONCENTRATIONS UPPER MIDDLE ALLUVIUM UNIT VICINITY OF AREA 7



366.1402\Area12-MAU-hydrographs-Oct07\27Feb2008

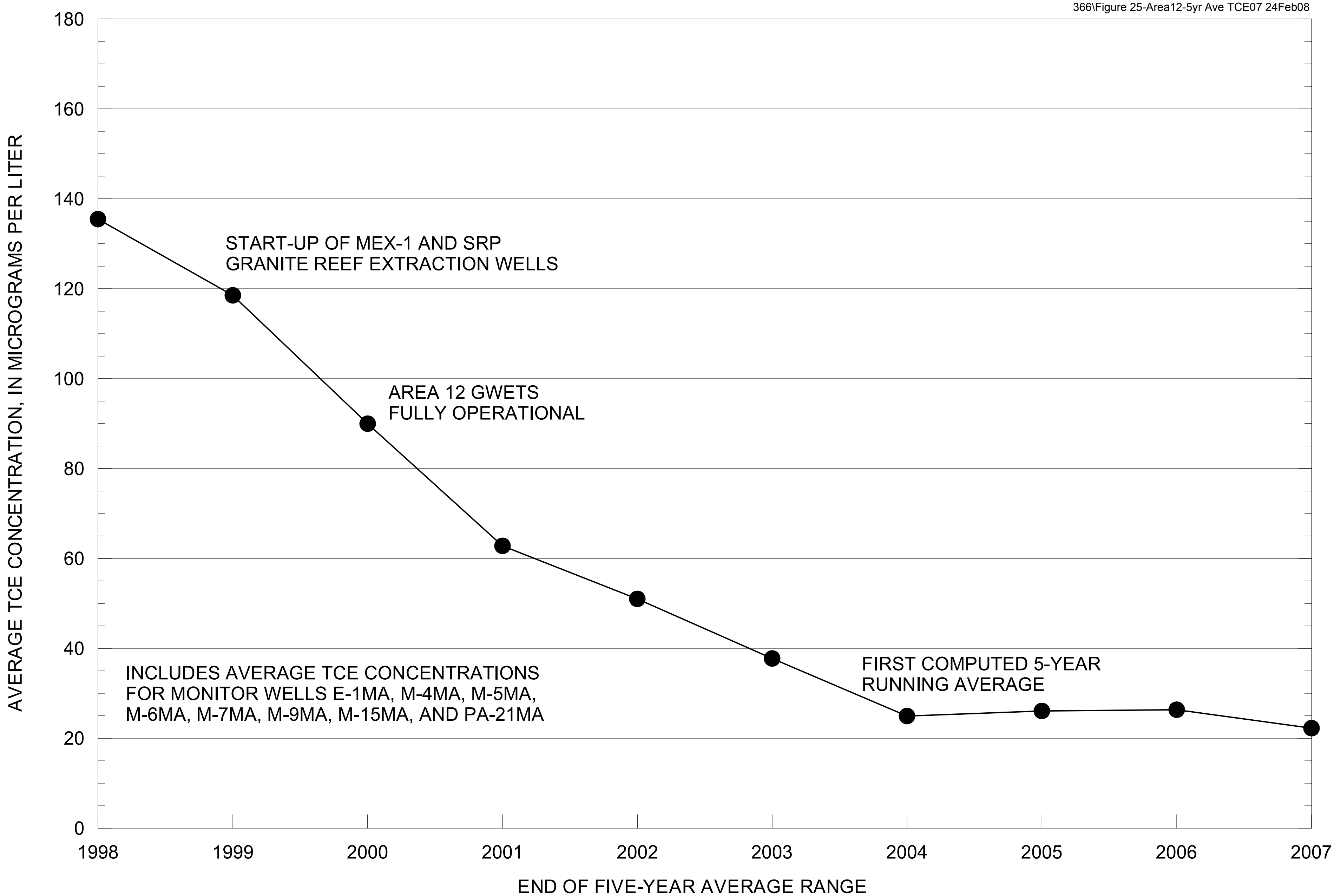
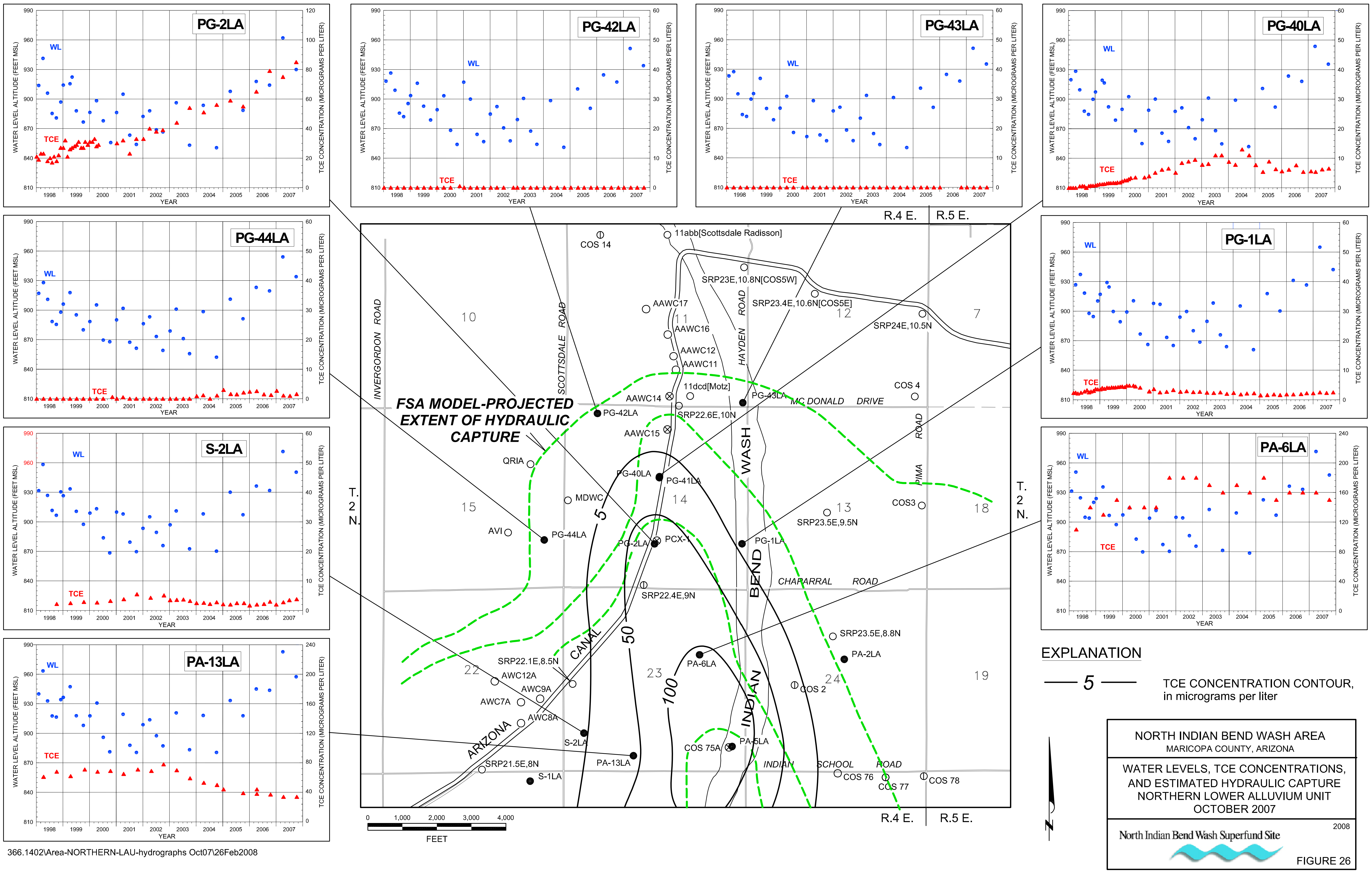


FIGURE 25. FIVE-YEAR RUNNING AVERAGE TCE CONCENTRATIONS UPPER MIDDLE ALLUVIUM UNIT, VICINITY OF AREA 12

North Indian Bend Wash Superfund Site



366.1402\Area-NORTHERN-LAU-hydrographs Oct07\26Feb2008

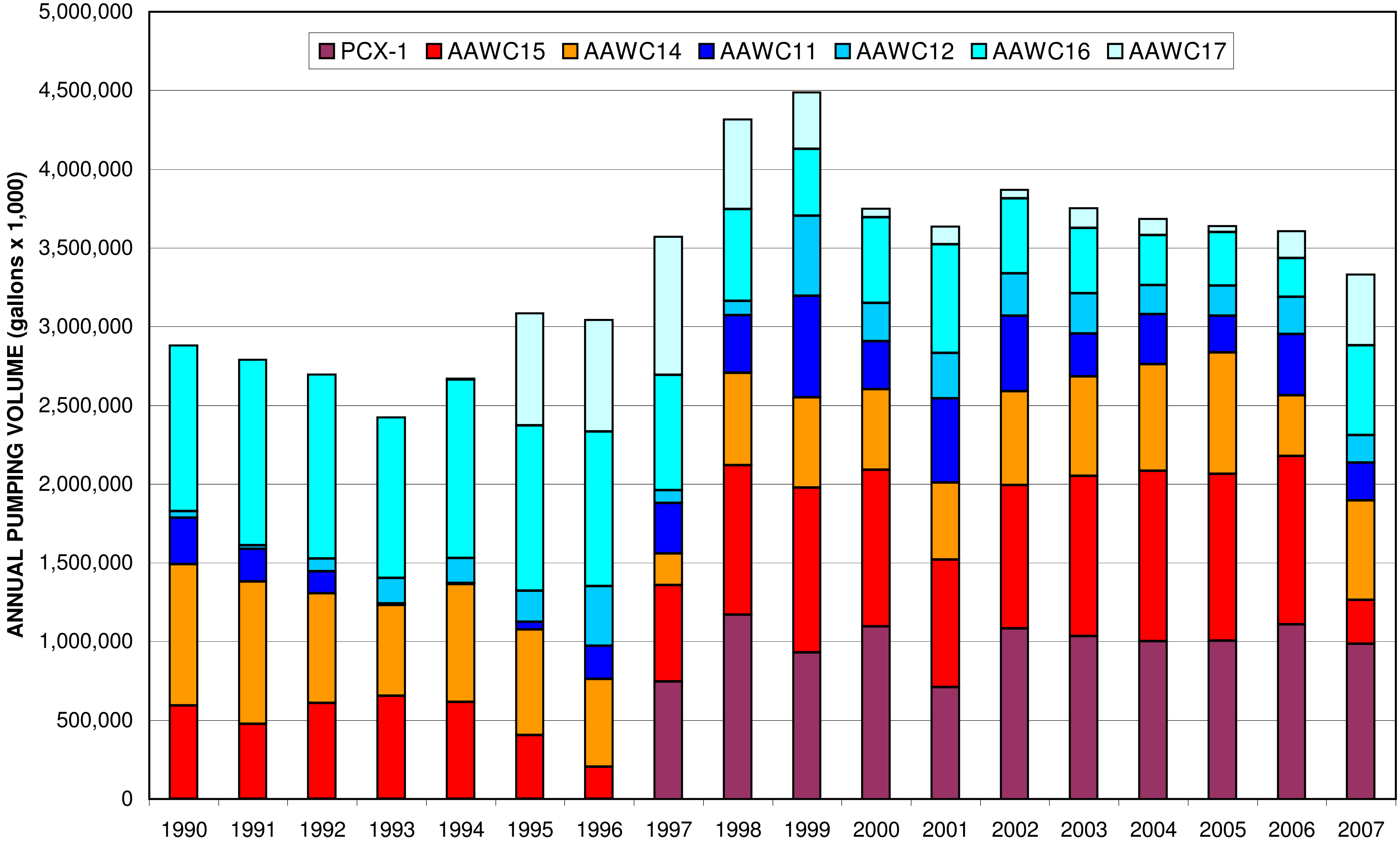


FIGURE 27. DISTRIBUTION OF PUMPING IN AAWC WELLFIELD

APPENDIX A

ROLES AND RESPONSIBILITIES FOR
NIBW SUPERFUND SITE REMEDIAL ACTIONS

ADEQ Arizona Department of Environmental Quality
REMEDIAL PROJECT MANAGER
Robert Peeples Don Atkinson

EPA
REMEDIAL PROJECT MANAGER
Jamey Watt

CH2MHILL
EPA RESPONSE ACTION CONTRACTOR
Phil Whitmore, P.G.

SIEMENS
REMEDIATION MANAGER
Gary Jones, Esq.

Motorola
REMEDIATION PROGRAM MANAGER
Terry Lockwood

gsk GlaxoSmithKline
REMEDIATION MANAGER
Tom Beggs

City of Scottsdale
PROJECT COORDINATOR
Craig Miller

North Indian Bend Wash Superfund Site
NIBW Participating Companies
PROJECT COORDINATOR
Dennis Shirley, P.G.
PROJECT ENGINEER
James Lutton, P.E.

SRP Delivering more than power.
PROJECT COORDINATOR
Karol Wolf

TRANSWEST GEOCHEM
GROUNDWATER REMEDIATION PROGRAM SUPERVISING LABORATORY CONTRACTOR
Tandy Partain

SRP Delivering more than power.
GROUNDWATER MONITORING PROGRAM SUPERVISING LABORATORY CONTRACTOR
Linda Johnson

City of Scottsdale
CGTF
Brian Paulson

- COS-71
- COS-72
- COS-75A

LFR
AREA 7 GWETS COORDINATOR
Michael Nesky

- 7EX-1UA
- 7EX-3aMa
- 7EX-4MA
- 7EX-5MA

EnSolutions
AREA 12 GWETS COORDINATOR
Larry Lynch

- MEX-1

American Water
MRTF COORDINATOR
Mike West

- AAWC-15

SRP Delivering more than power.
Groundwater Monitoring & Extraction Well Services

- Monitor Well Network
- COS-31
- PCX-1
- Granite Reef Well

CONTACTS LIST AND KEY ROLES

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1. Brian Paulson, CGTF Coordinator *
   Phone: (480) 312-0390
   Mobile: (602) 821-2300
   Pager: (602) 914-9615
2. Senior Operator on staff *
   Phone: (480) 312-8708
   Pager: (602) 223-0025
3. Stuart Wilson, Treatment Manager *
   Phone: (480) 312-8722
   Mobile: (480) 694-4421

After Hours:

1. Brian Paulson, CGTF Coordinator
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   Mobile: (602) 821-2300
2. Senior Operator on staff
   Phone: (480) 312-8708
   Pager: (602) 223-0025
3. Water Production Operator on call
   Pager: (602) 223-0481
4. Telemetry Pager
   Pager: (602) 223-4812
5. Stuart Wilson, Treatment Manager
   Mobile: (480) 694-4421

COS Regulatory Contact List:

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B.) Carie Wilson, COS Regulatory Compliance Manager at (480) 312-8718 or after hours at mobile (602) 499-7942
C.) Suzanne Grendahl, Water Quality Director at (480) 312-8719 or after hours at mobile (623) 640-1474

*Address: 8787 E. Hualapai Drive
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Area 7 GWETS

Sean Coury
LFR

Area 12 GWETS

Larry Lynch
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Tandy Partain
TransWest Geochem
3725 East Atlanta Ave
Phoenix, AZ 85040

APPENDIX B

NORTHERN LAU CONTINUOUS
WATER LEVEL MONITORING GRAPHS, 2007

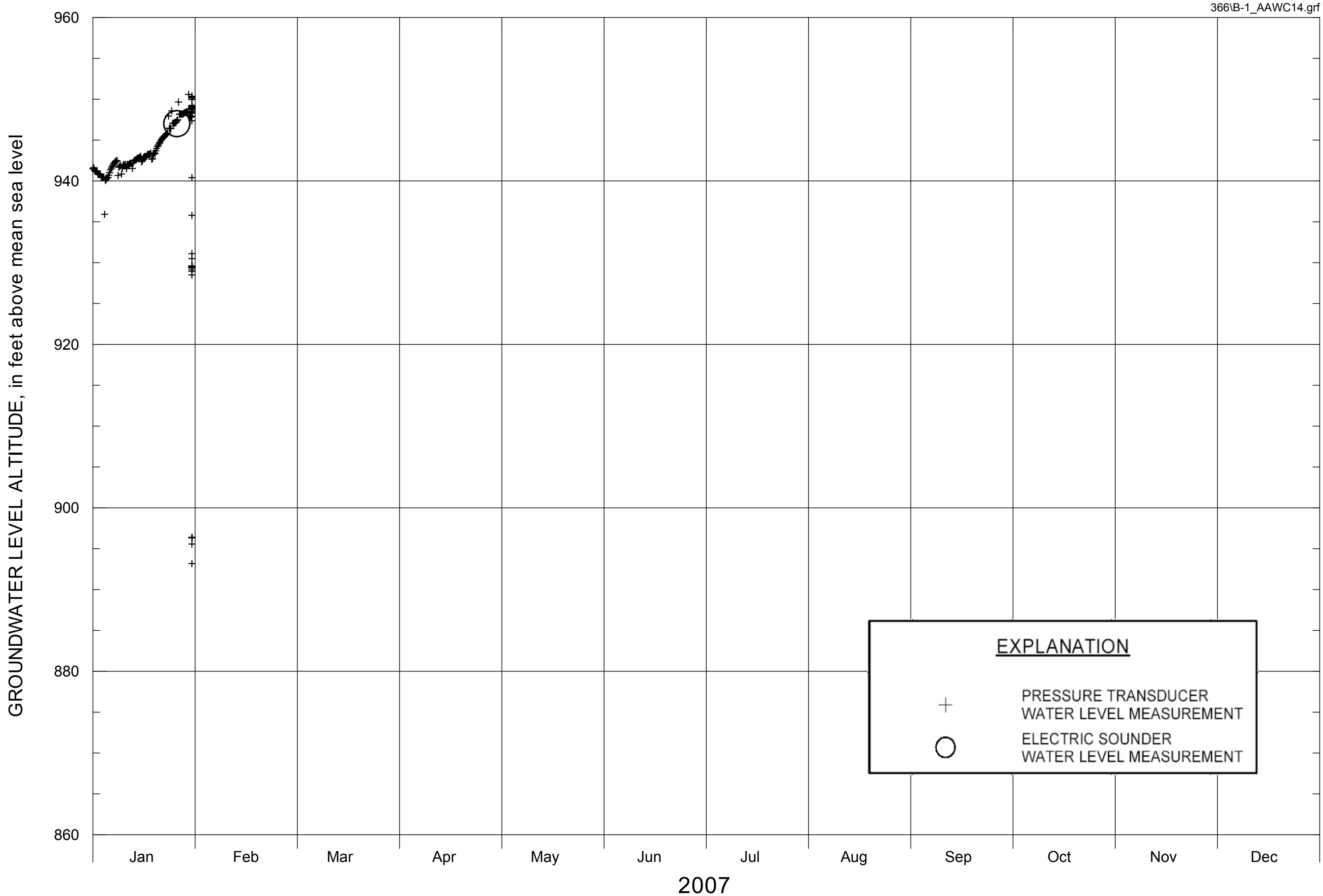


FIGURE B-1. GROUNDWATER LEVEL HYDROGRAPH FOR EXTRACTION WELL AAWC 14

Note: Due to pump failure pressure transducer was removed and no further data was collected in 2007.

North Indian Bend Wash Superfund Site

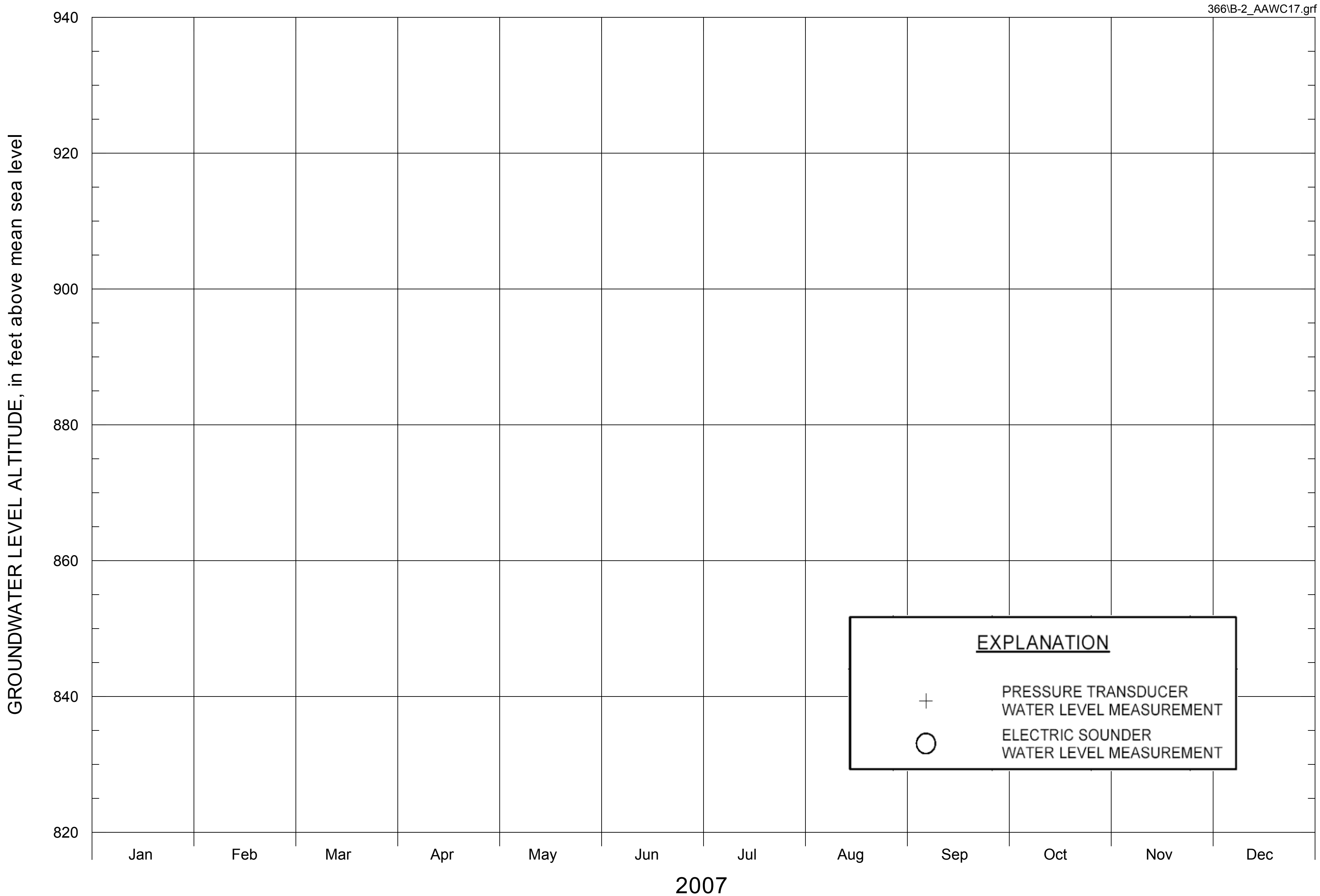


FIGURE B-2. GROUNDWATER LEVEL HYDROGRAPH FOR EXTRACTION WELL AAWC 17

Note: Due to pump failure pressure transducer was removed and no data was collected in 2007.

North Indian Bend Wash Superfund Site

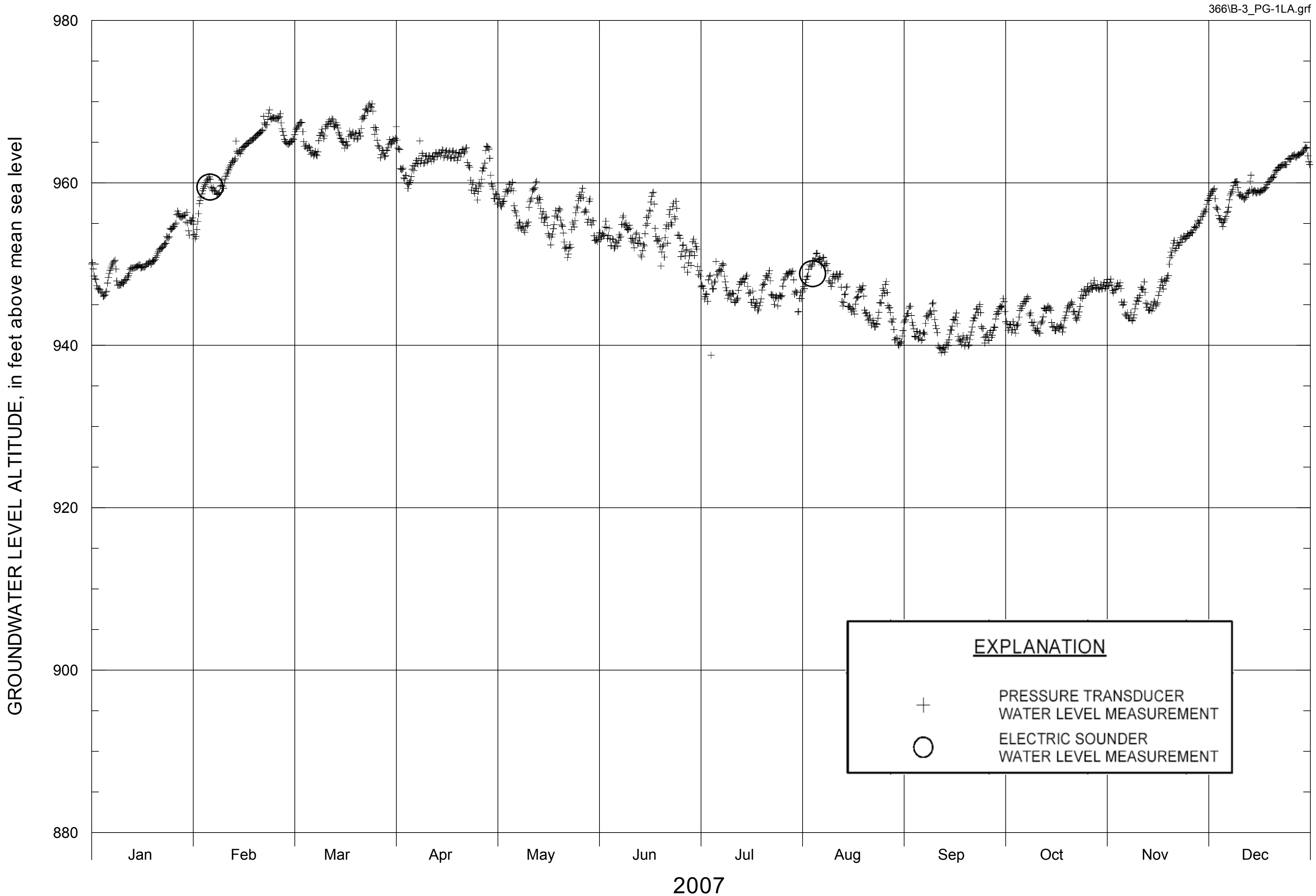


FIGURE B-3. GROUNDWATER LEVEL HYDROGRAPH FOR MONITOR WELL PG-1LA

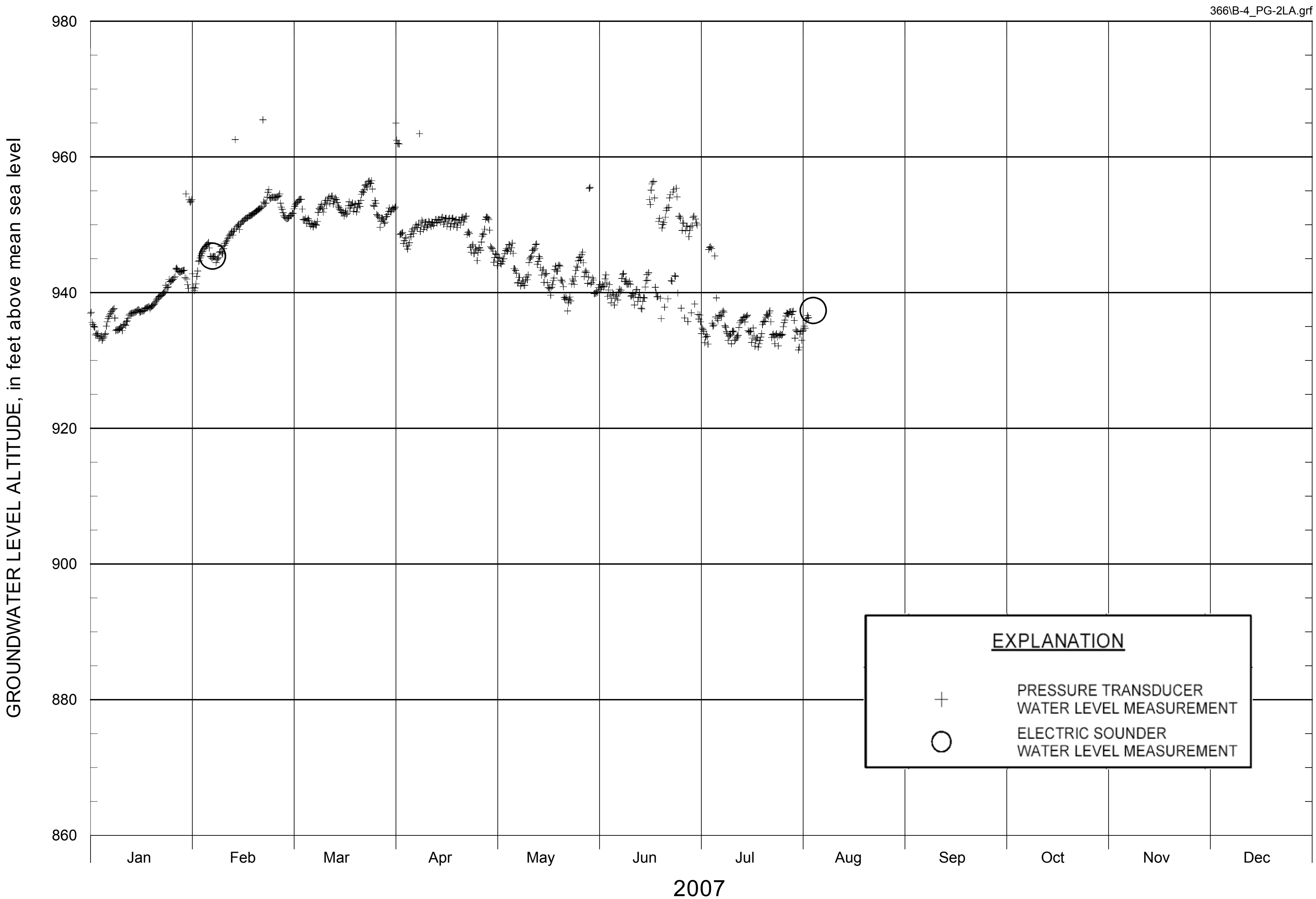


FIGURE B-4. GROUNDWATER LEVEL HYDROGRAPH FOR MONITOR WELL PG-2LA

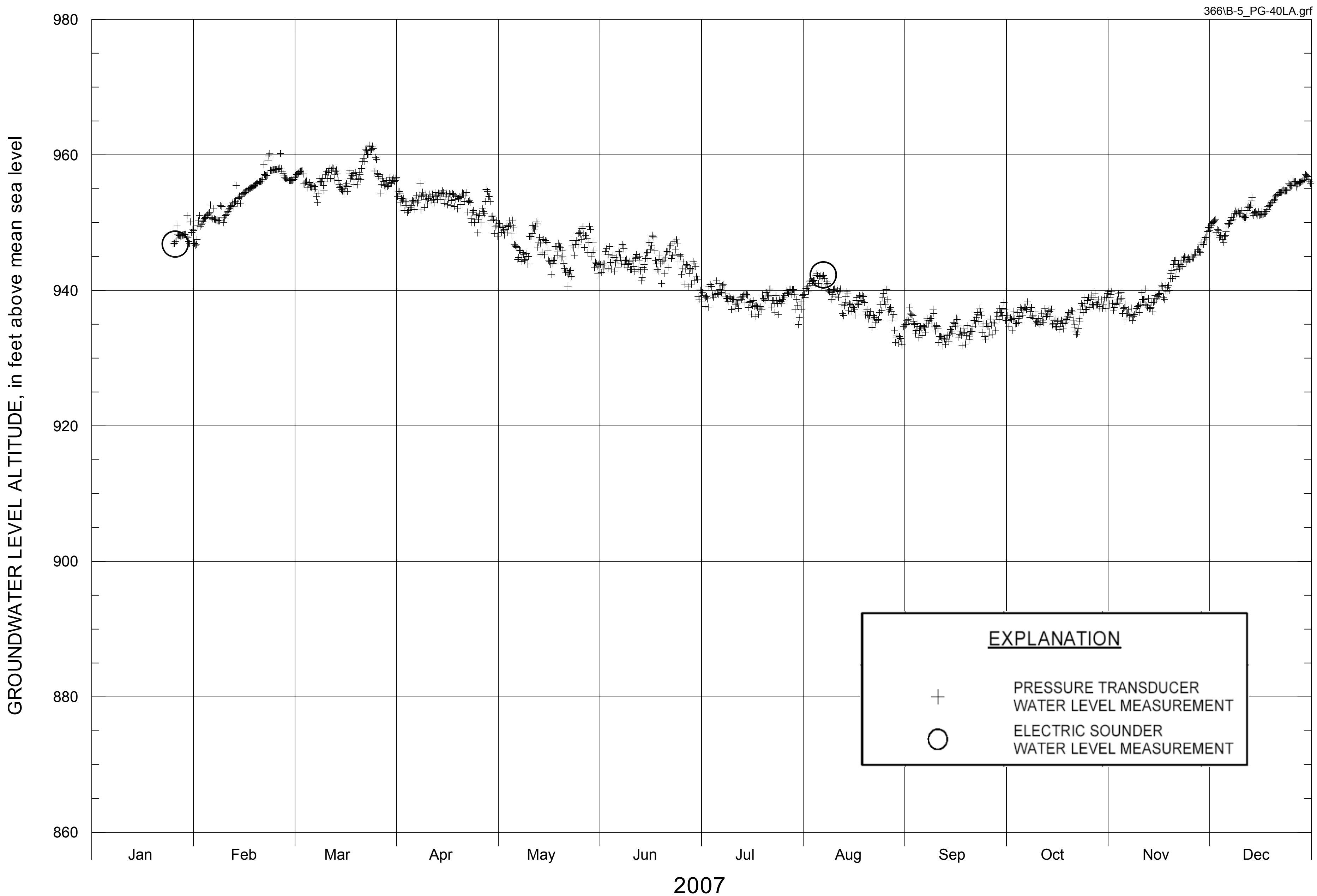


FIGURE B-5. GROUNDWATER LEVEL HYDROGRAPH FOR MONITOR WELL PG-40LA

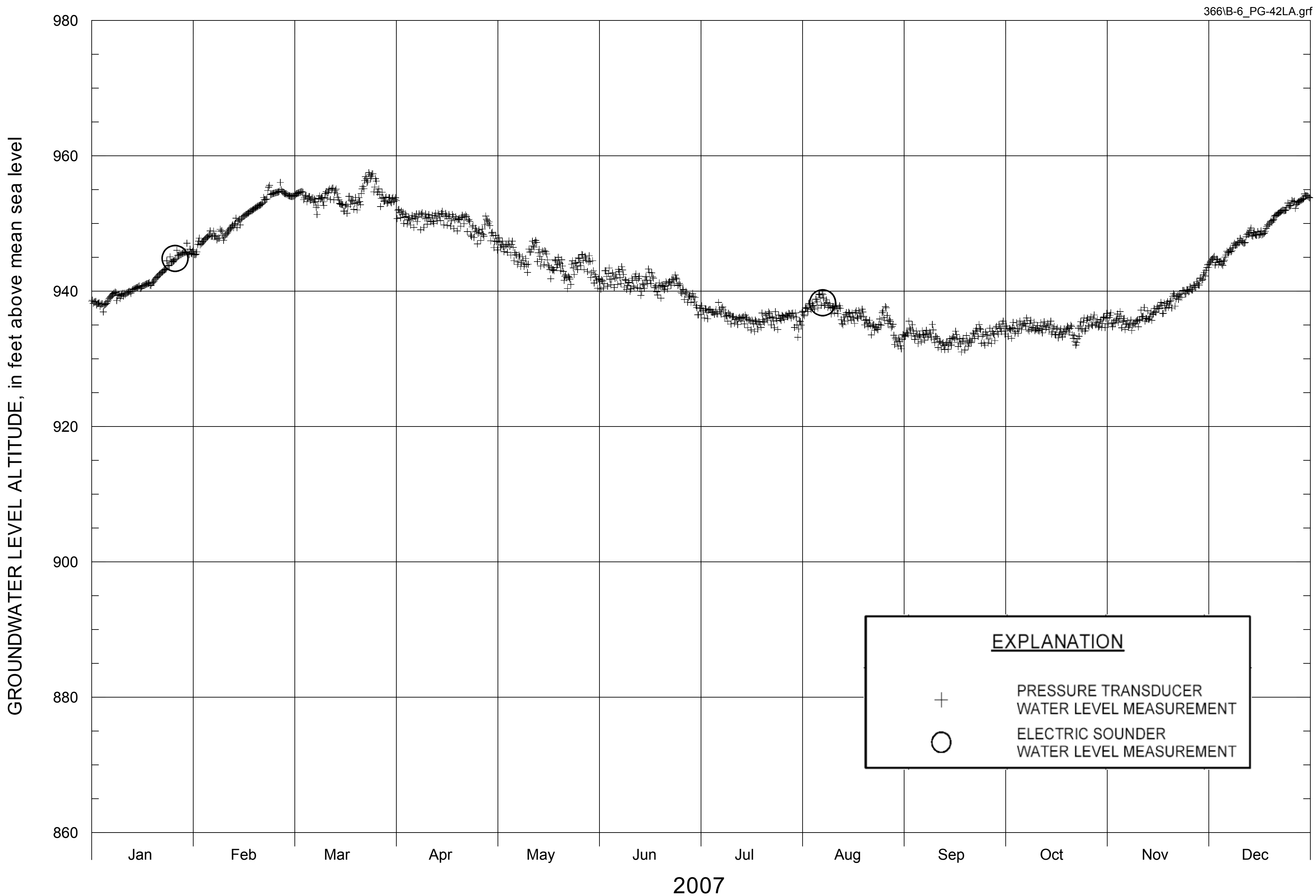


FIGURE B-6. GROUNDWATER LEVEL HYDROGRAPH FOR MONITOR WELL PG-42LA

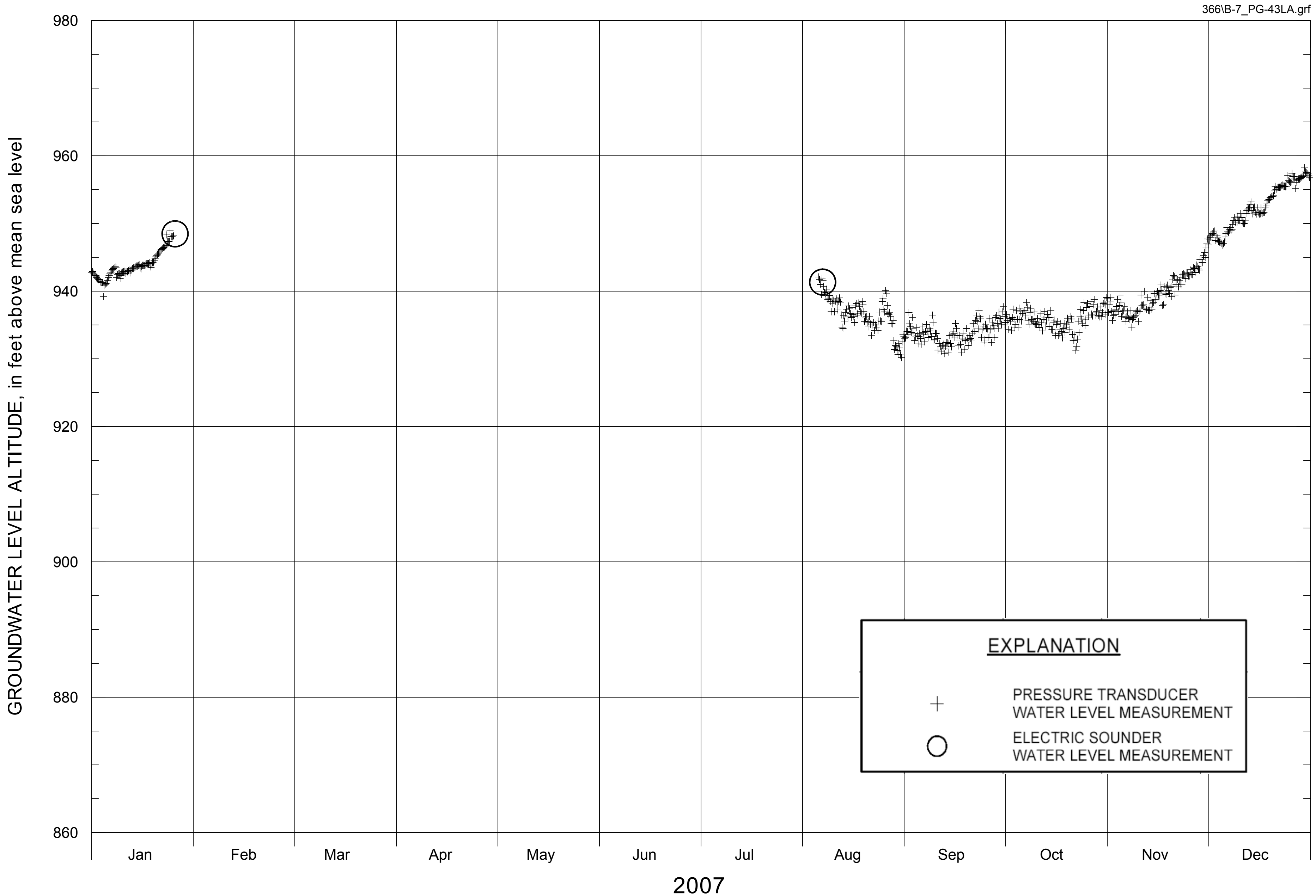


FIGURE B-7. GROUNDWATER LEVEL HYDROGRAPH FOR MONITOR WELL PG-43LA

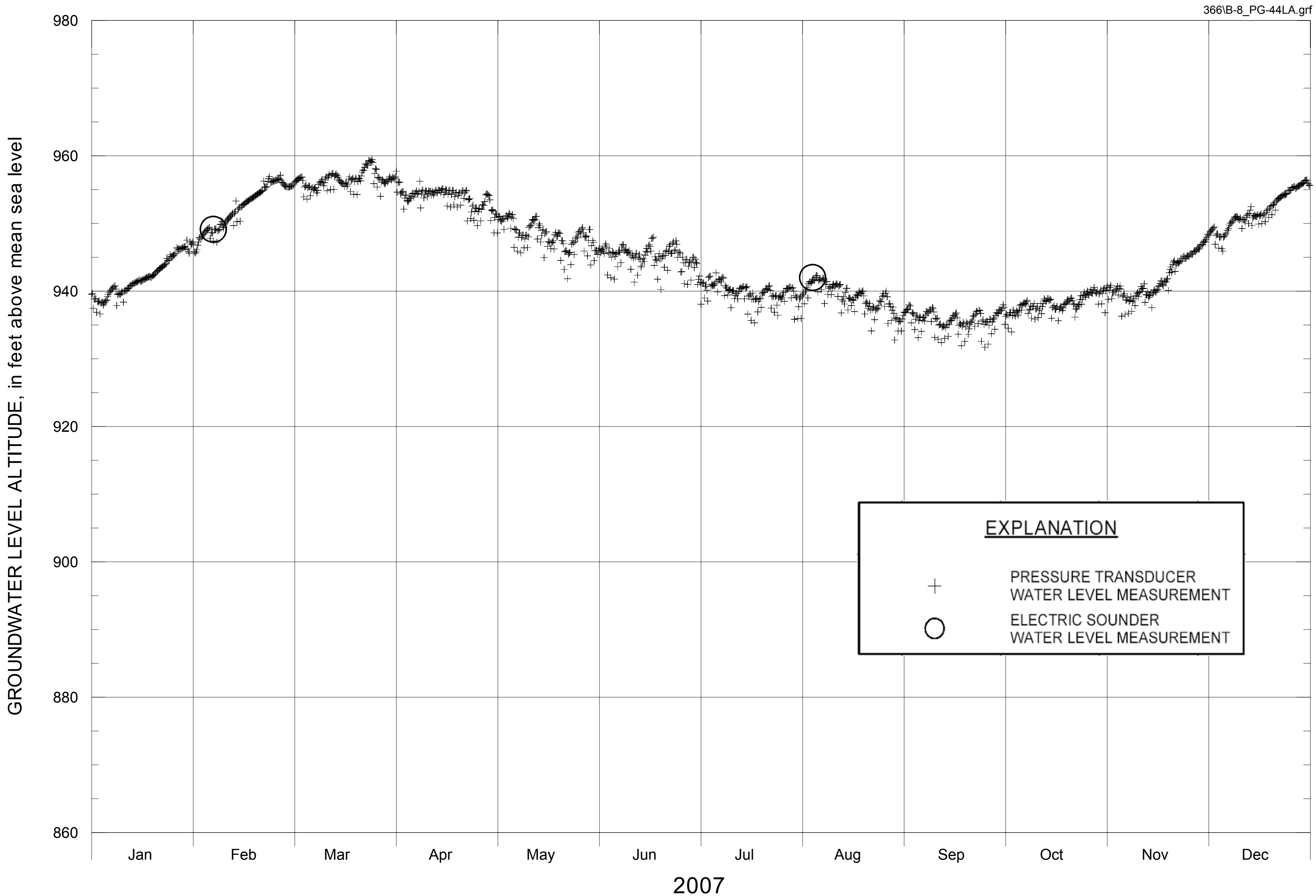
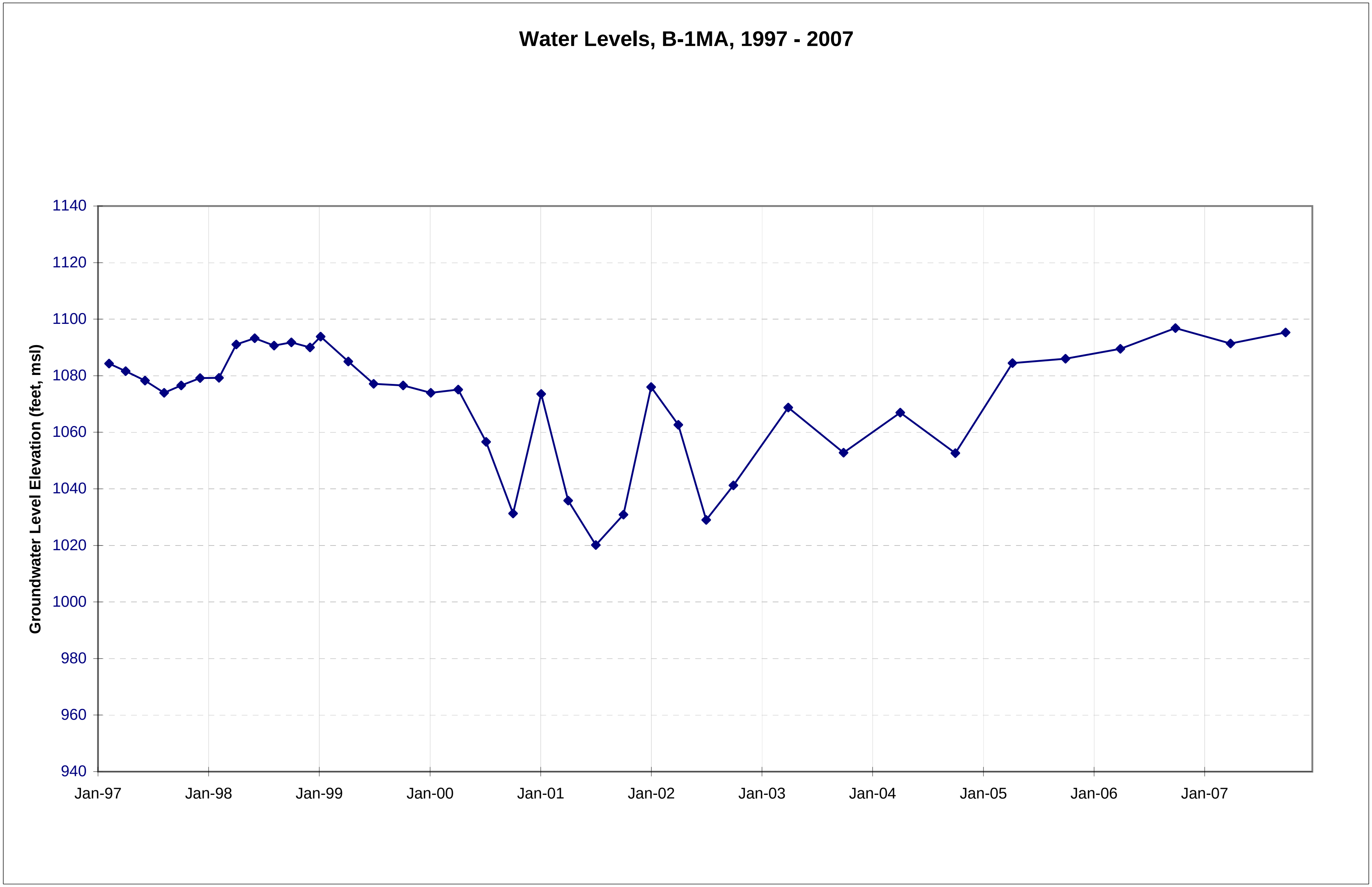


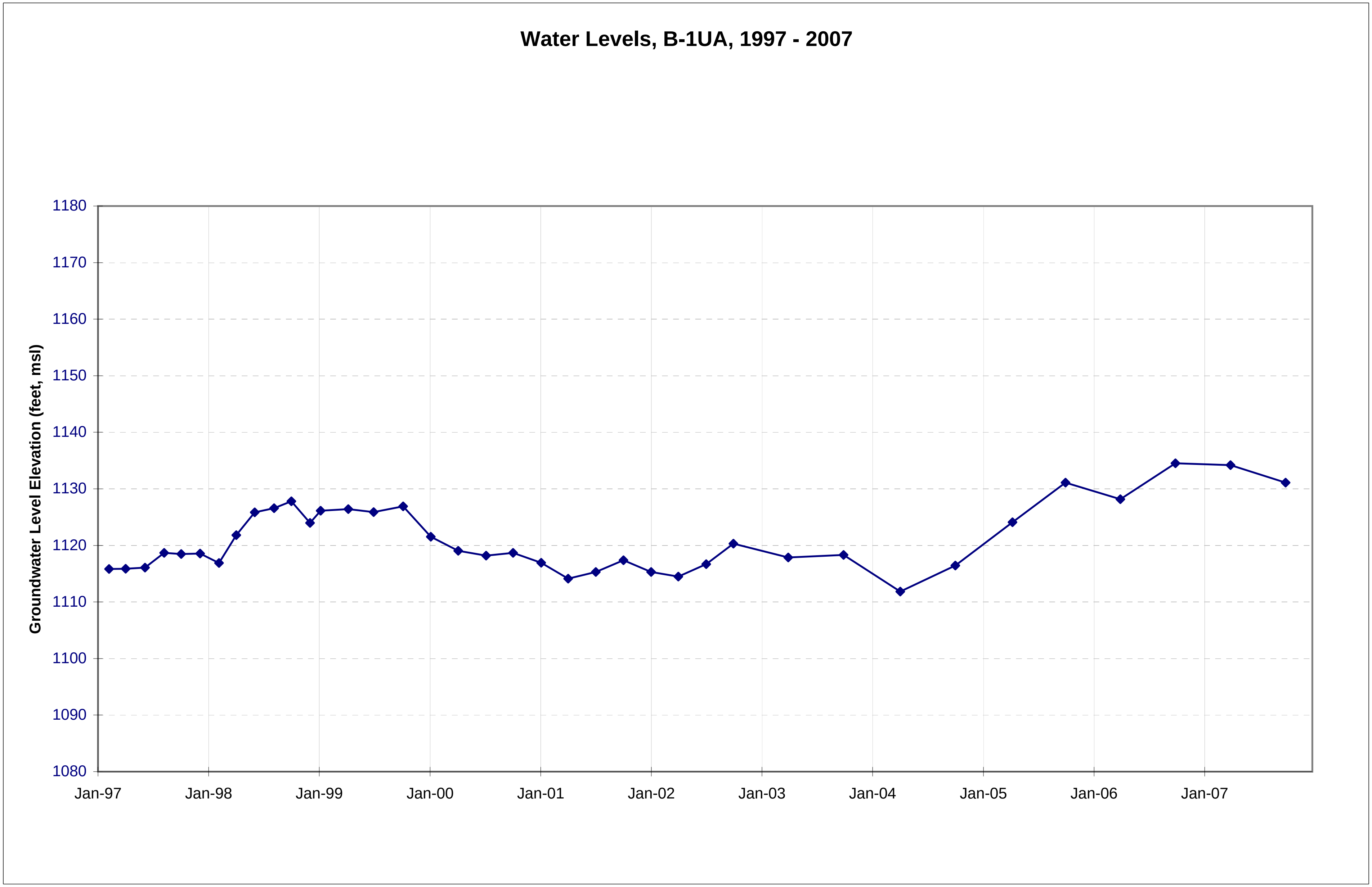
FIGURE B-8. GROUNDWATER LEVEL HYDROGRAPH FOR MONITOR WELL PG-44LA

APPENDIX C

WATER LEVEL HYDROGRAPHS FOR NIBW MONITOR WELLS



Water Levels, B-1MA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1140
1120
1100
1080
1060
1040
1020
1000
980
960
940
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07


Water Levels, B-1UA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1180
1170
1160
1150
1140
1130
1120
1110
1100
1090
1080
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
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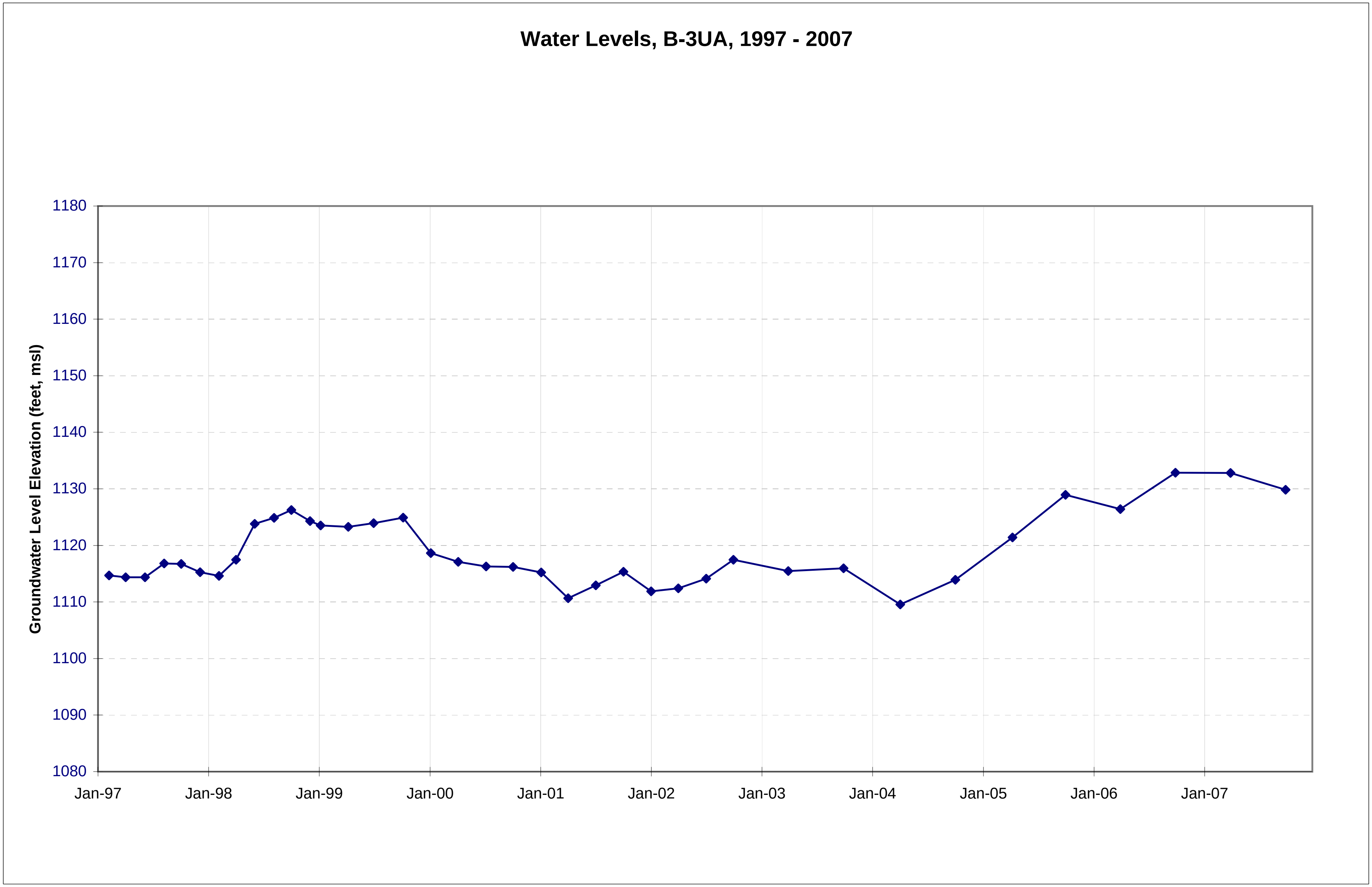
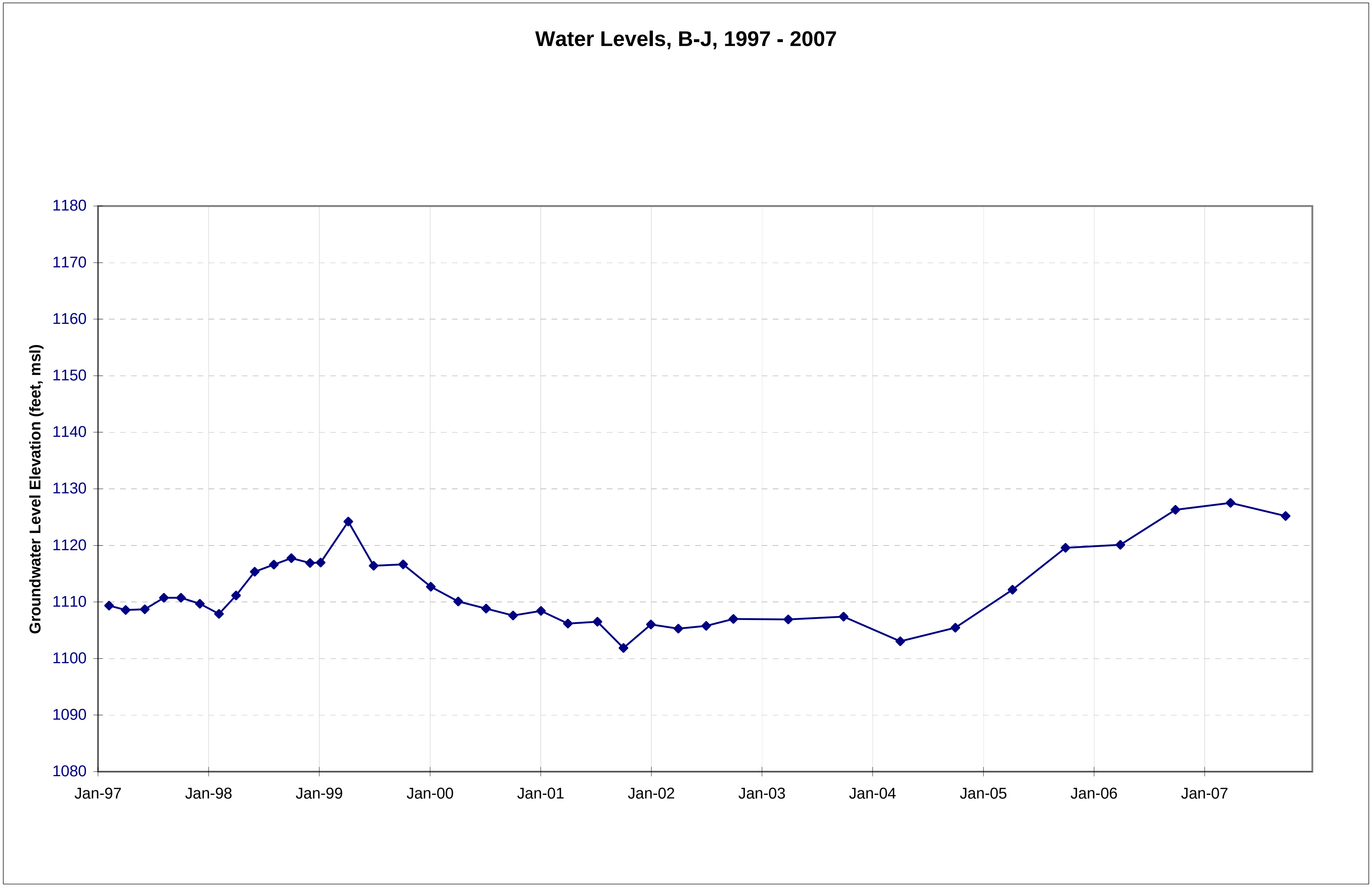
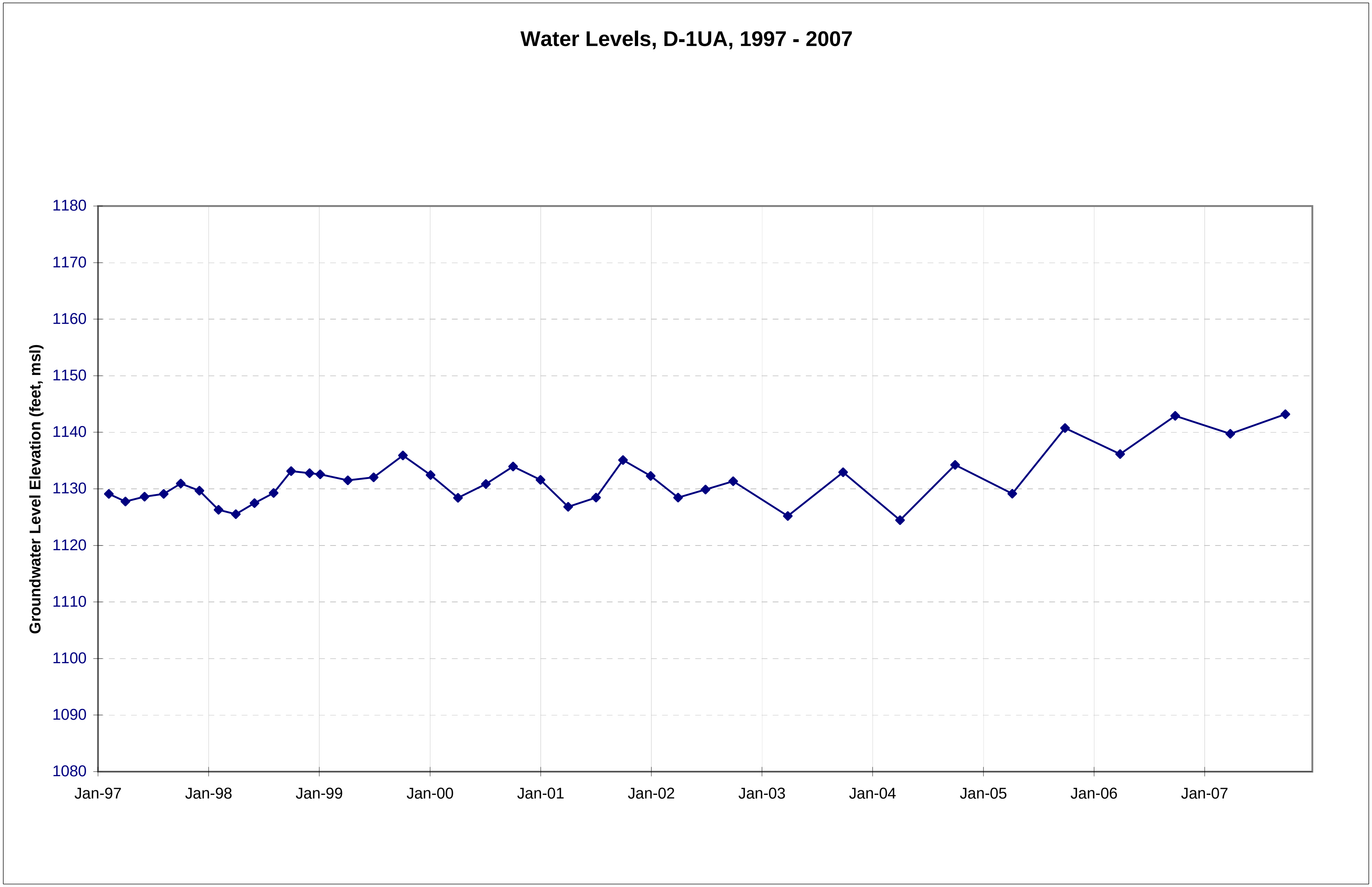
Jan-05
Jan-06
Jan-07


Water Levels, B-3UA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1180
1170
1160
1150
1140
1130
1120
1110
1100
1090
1080
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

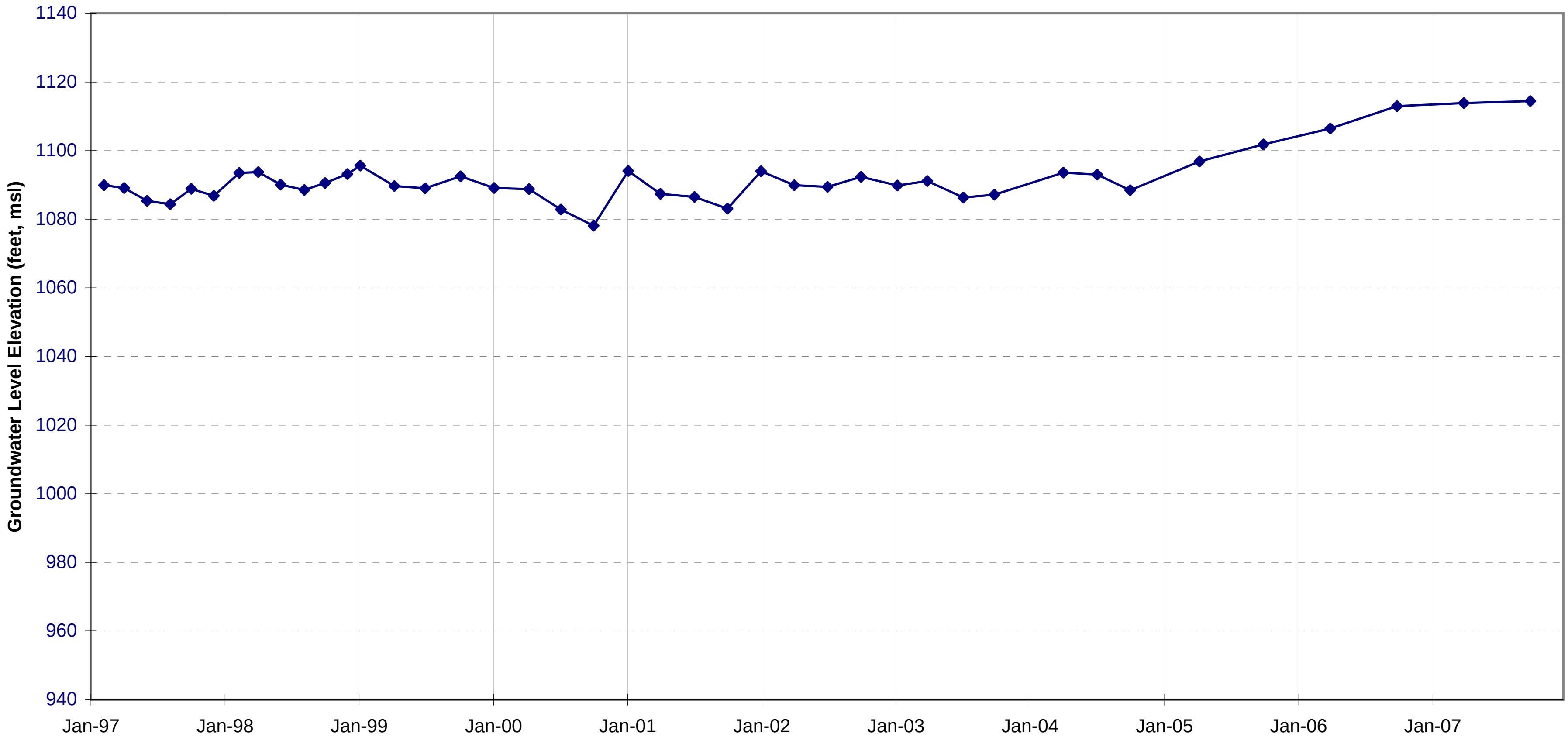


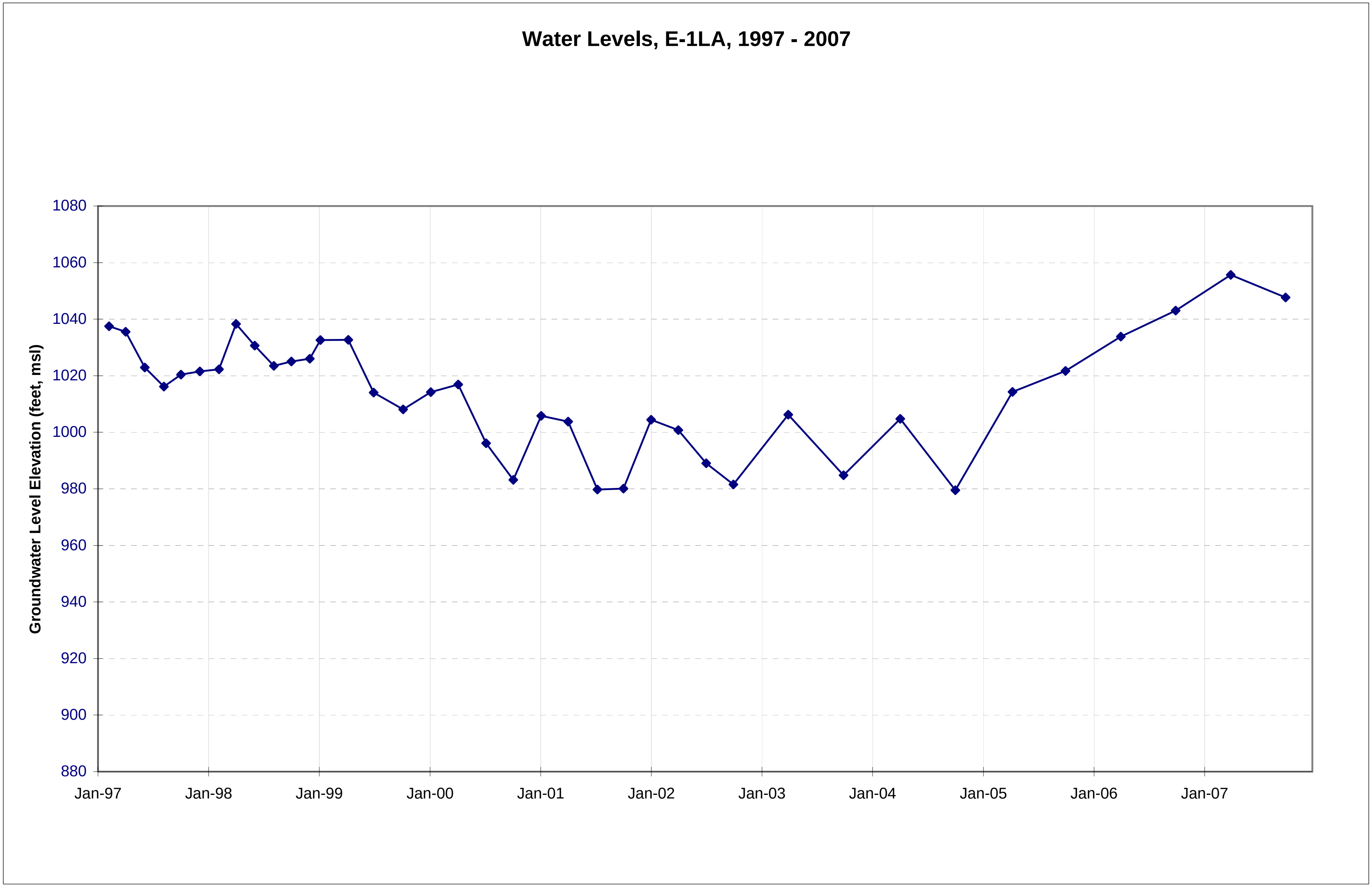
Water Levels, B-J, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1180
1170
1160
1150
1140
1130
1120
1110
1100
1090
1080
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07



Water Levels, D-1UA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1180
1170
1160
1150
1140
1130
1120
1110
1100
1090
1080
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

Water Levels, D-2MA, 1997 - 2007





Water Levels, E-1LA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1080
1060
1040
1020
1000
980
960
940
920
900
880
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
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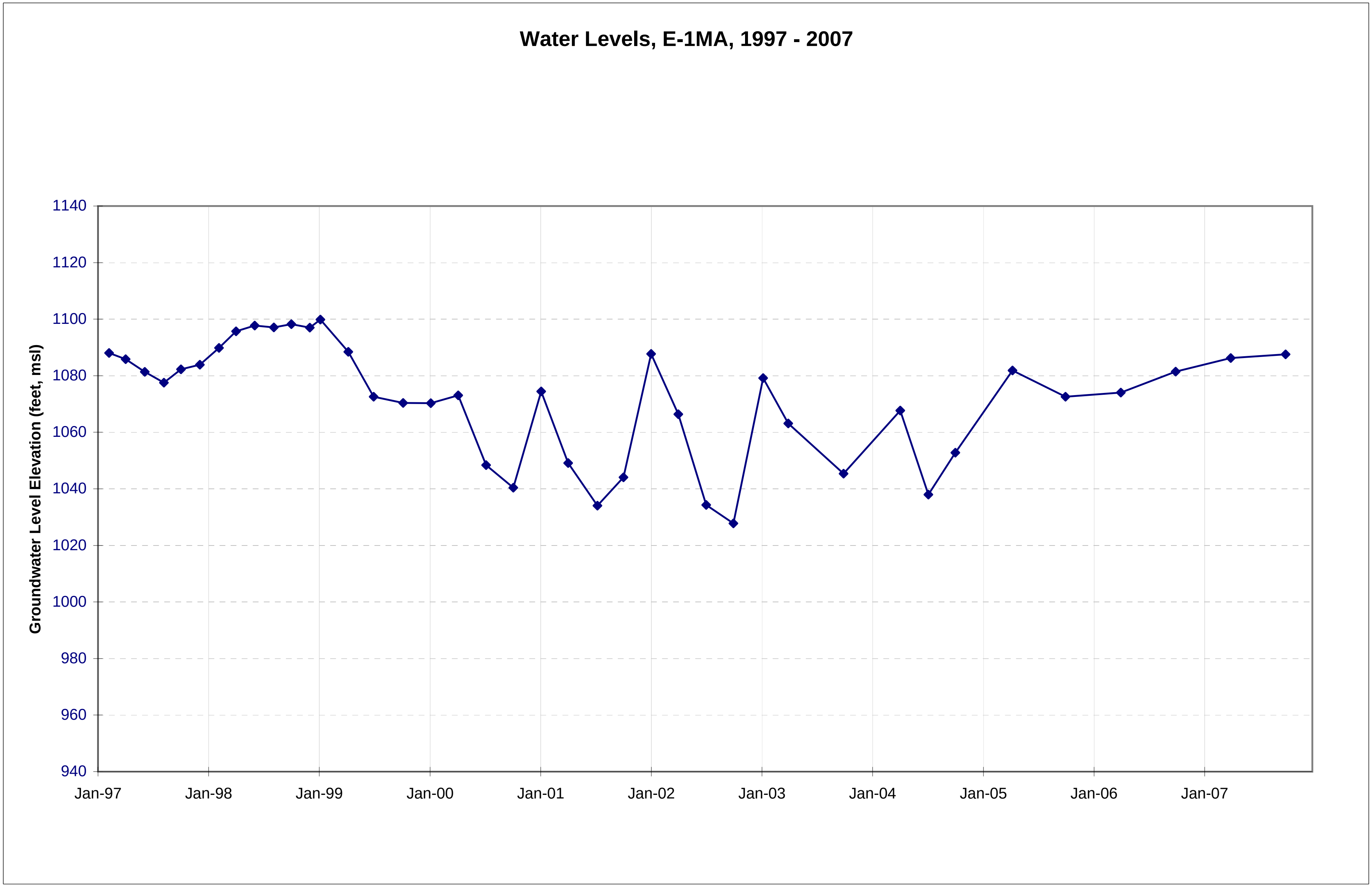
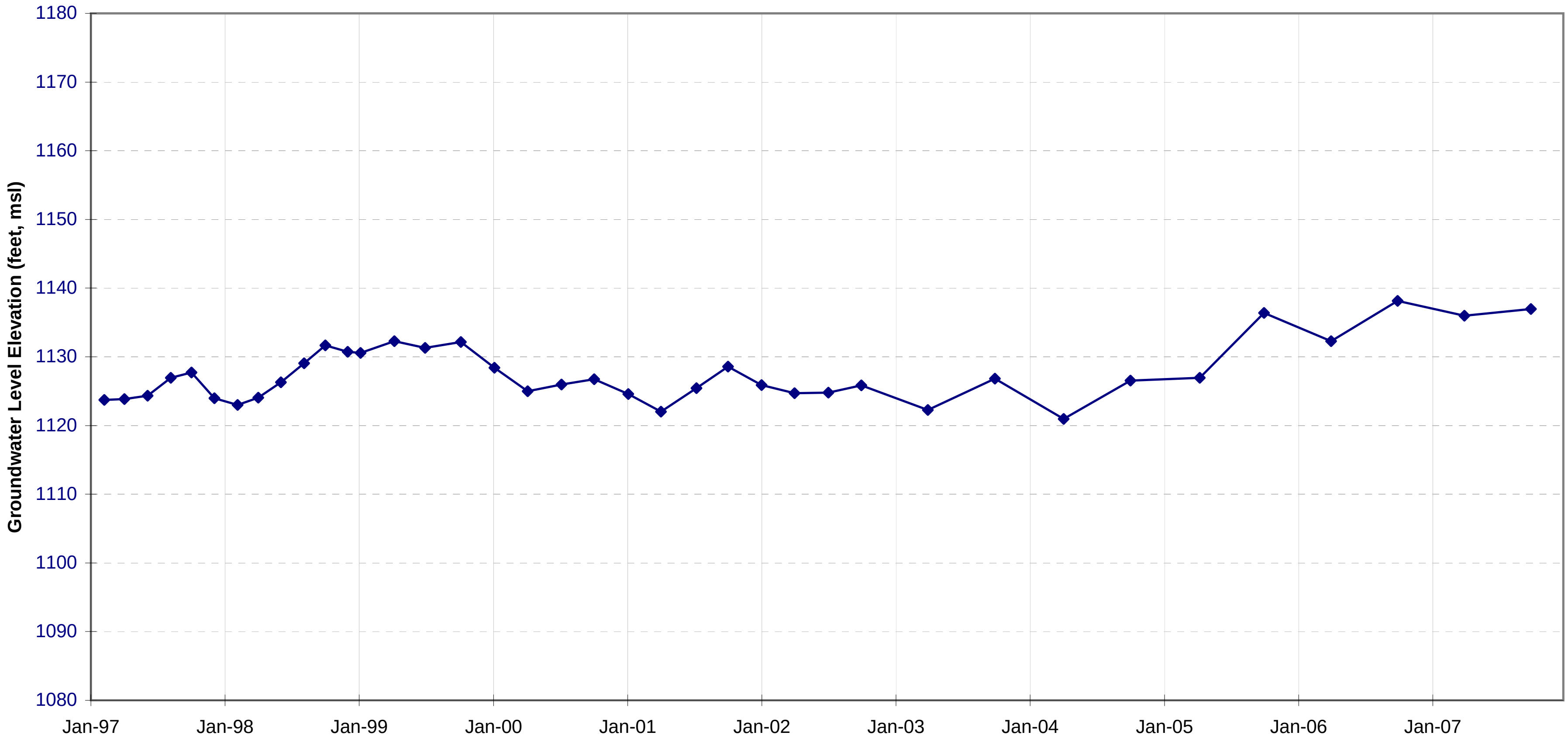
Jan-05
Jan-06
Jan-07

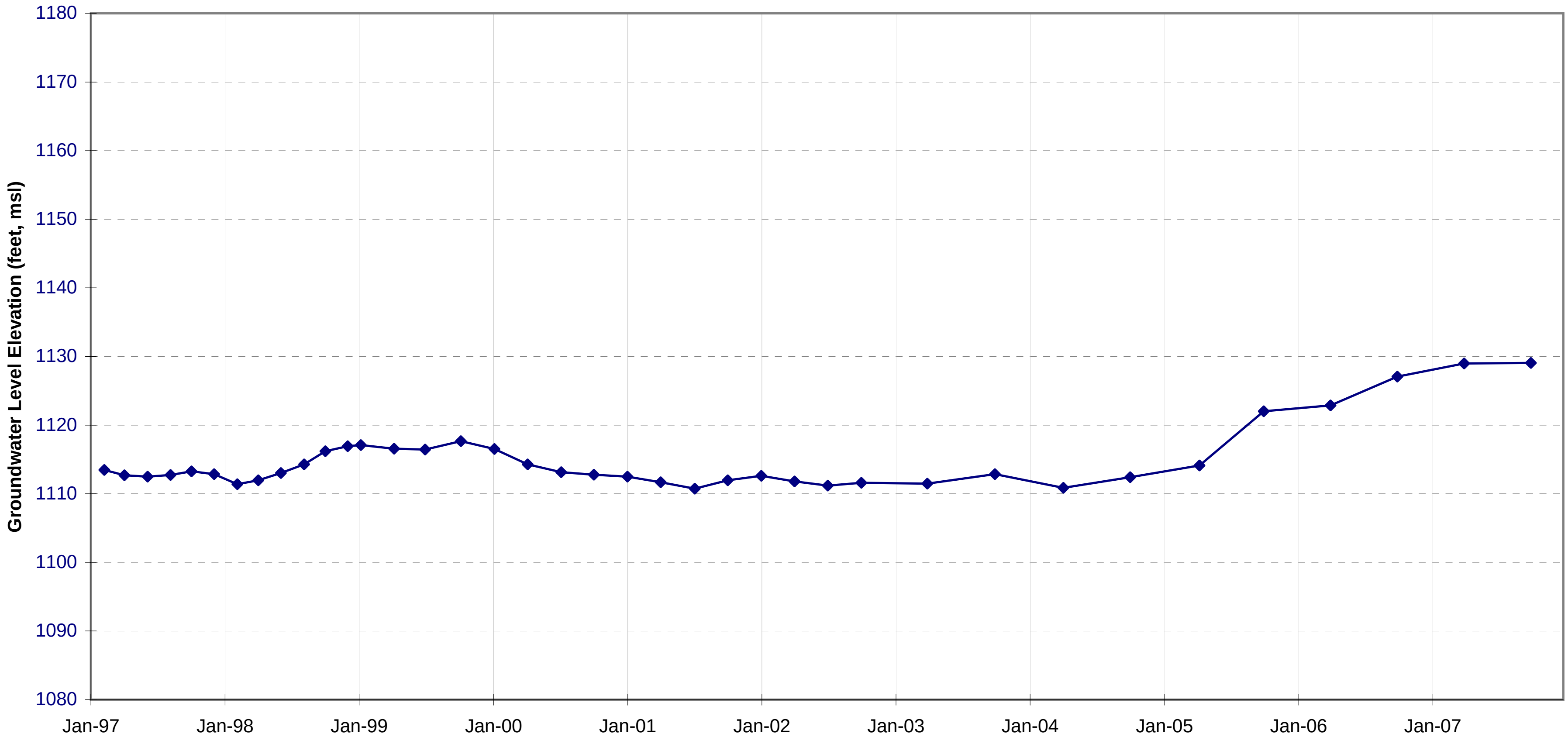


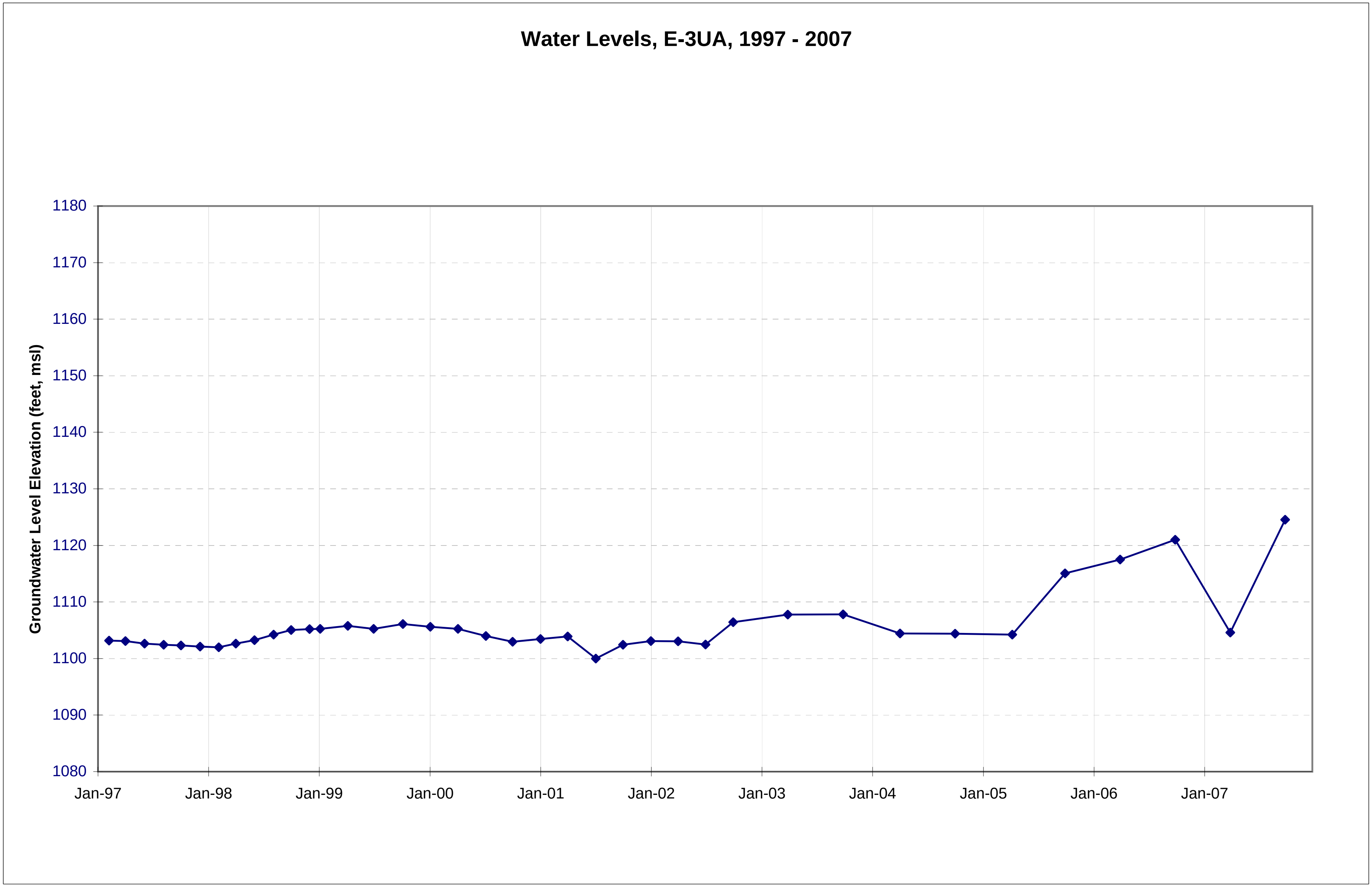
Water Levels, E-1MA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1140
1120
1100
1080
1060
1040
1020
1000
980
960
940
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

Water Levels, E-1UA, 1997 - 2007



Water Levels, E-2UA, 1997 - 2007




Water Levels, E-3UA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1180
1170
1160
1150
1140
1130
1120
1110
1100
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1080
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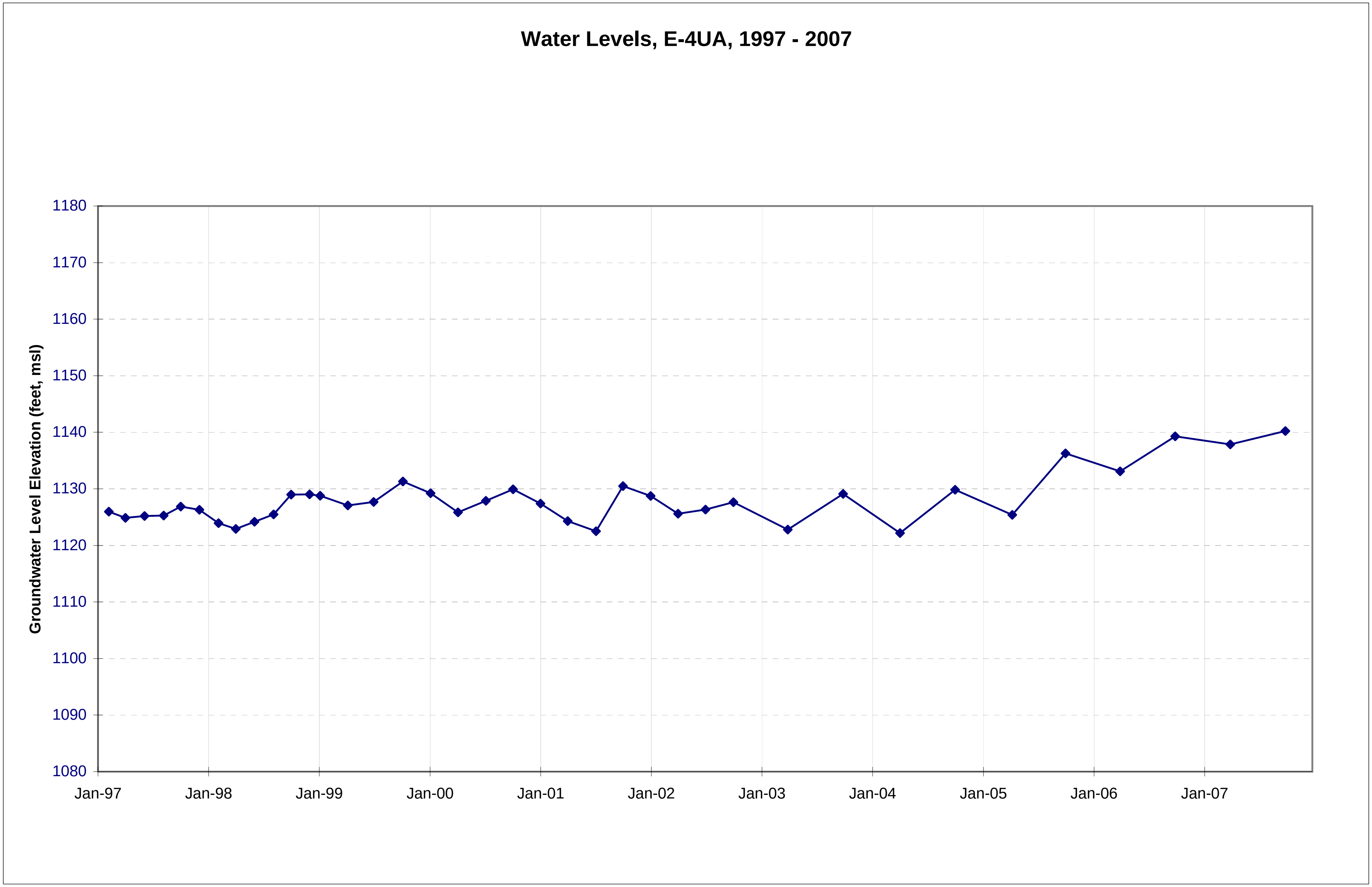
Jan-06
Jan-07


Water Levels, E-4UA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1180
1170
1160
1150
1140
1130
1120
1110
1100
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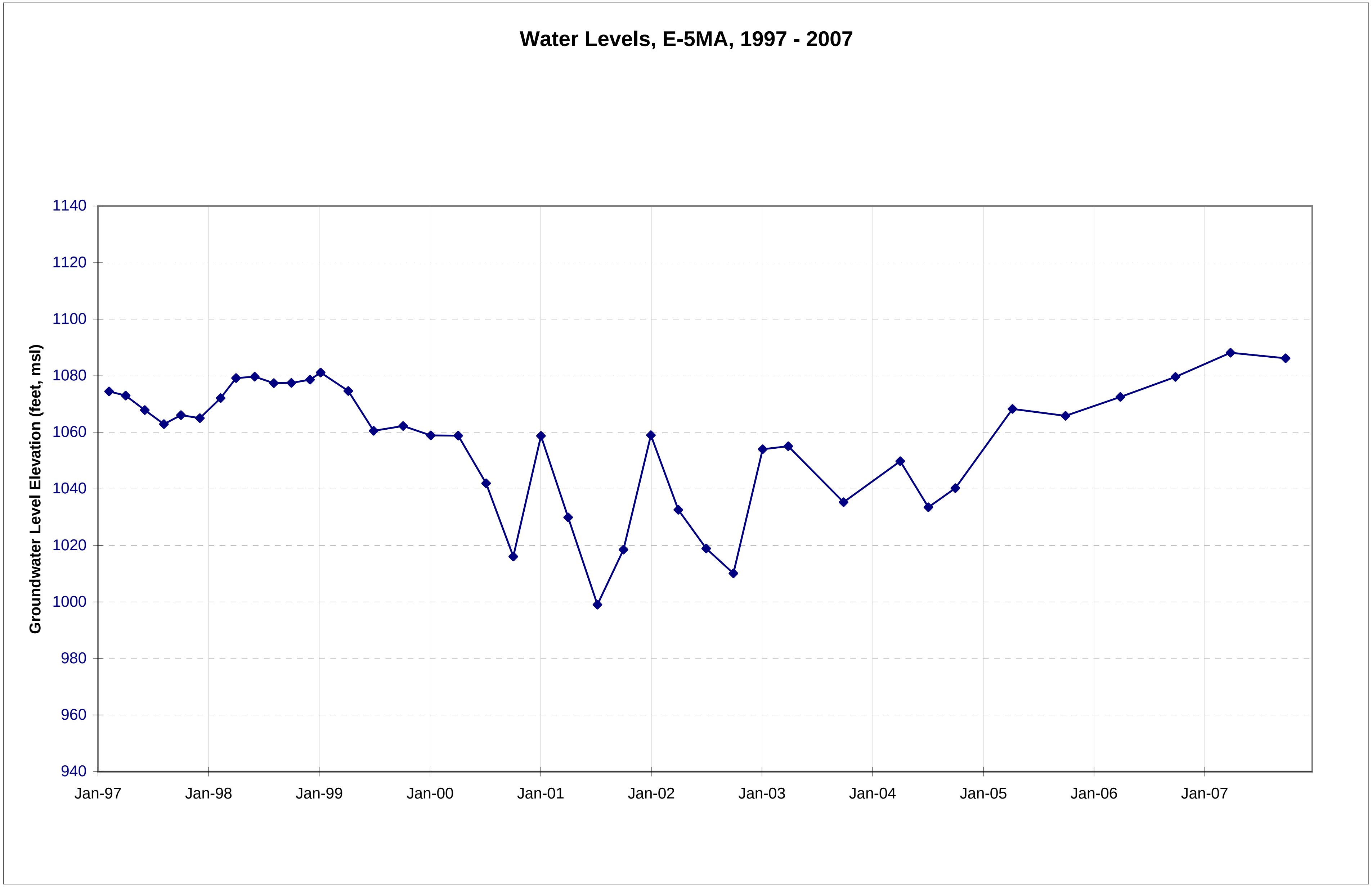
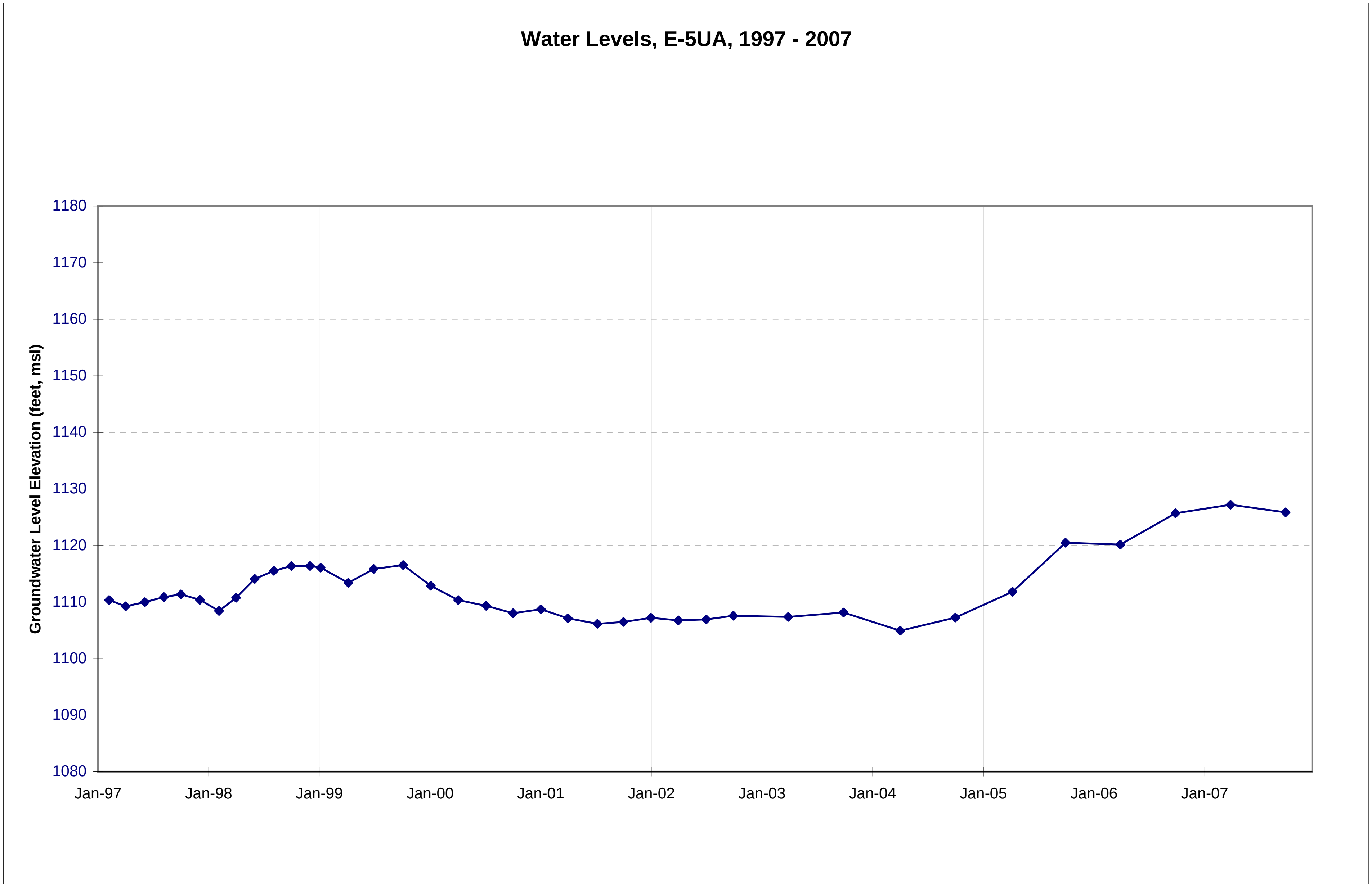
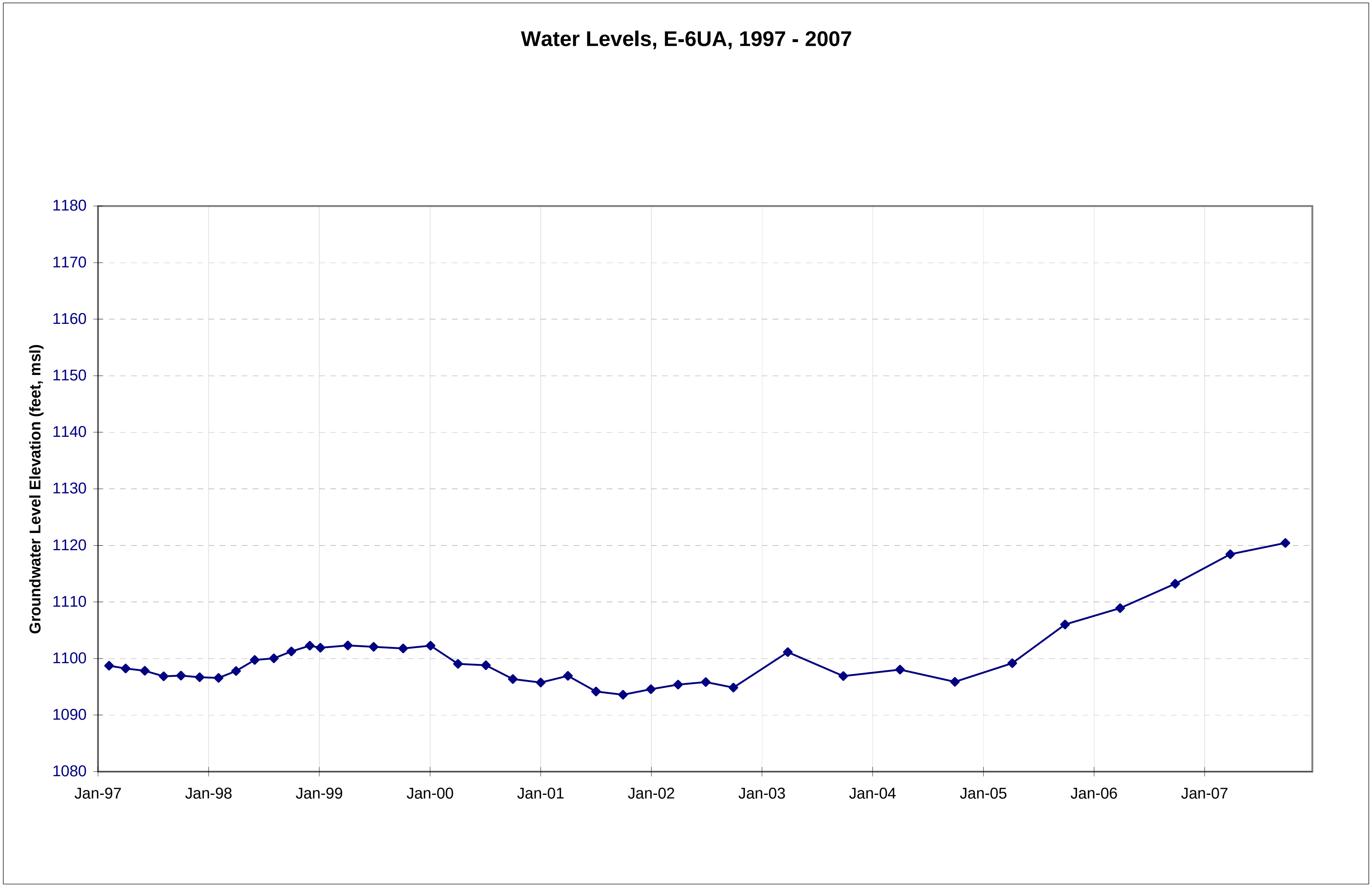
Jan-05
Jan-06
Jan-07

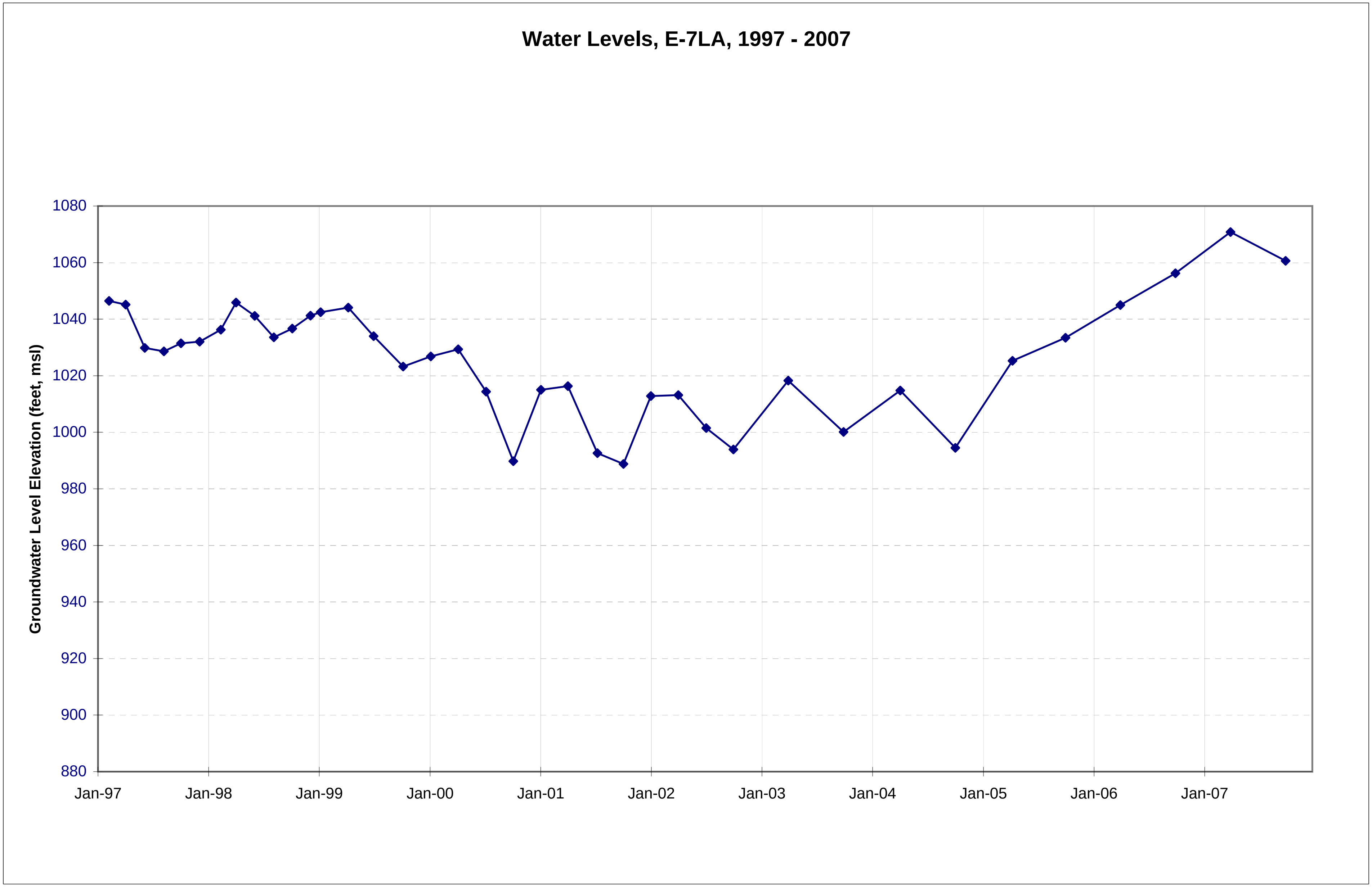

Water Levels, E-5MA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1140
1120
1100
1080
1060
1040
1020
1000
980
960
940
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07



Water Levels, E-5UA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1180
1170
1160
1150
1140
1130
1120
1110
1100
1090
1080
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

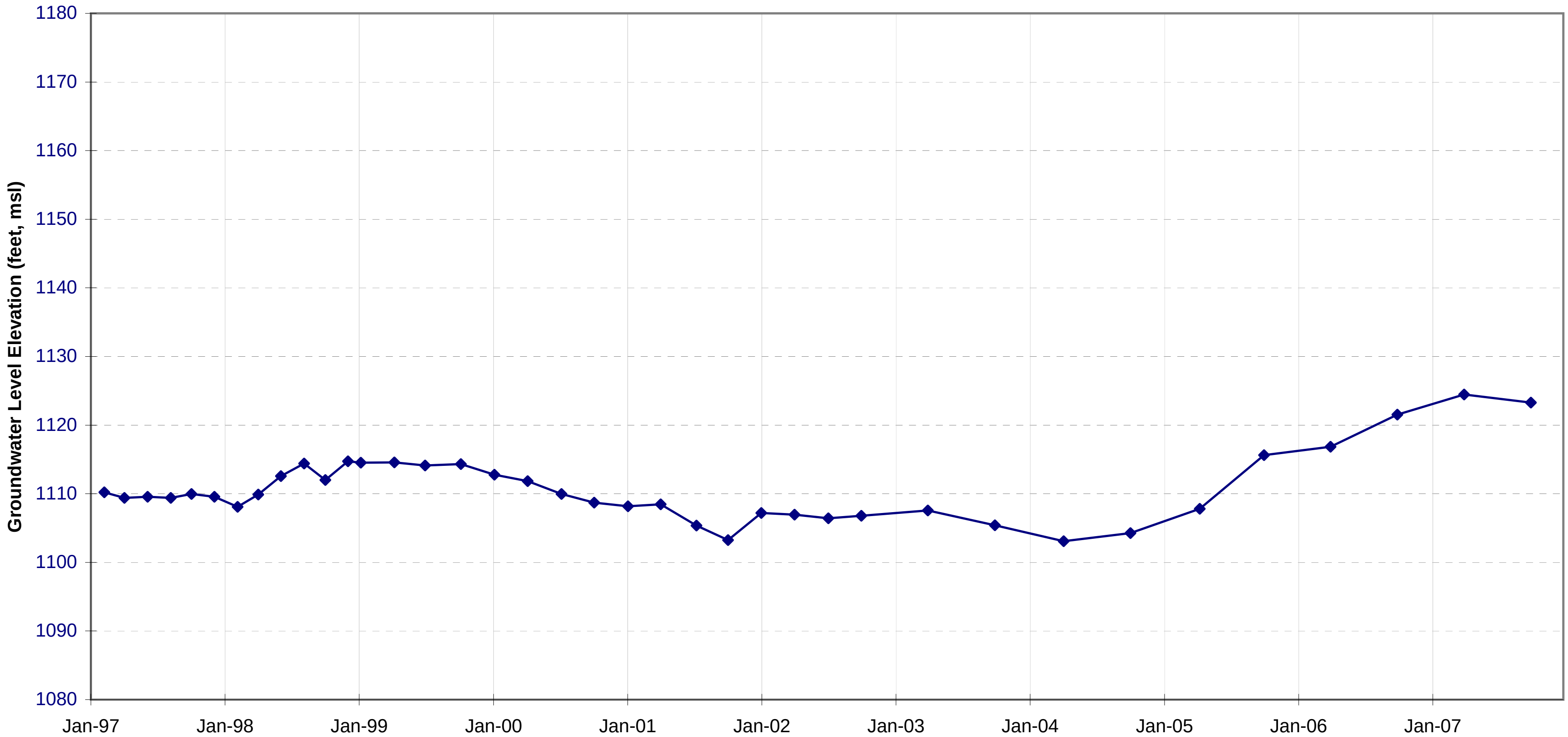


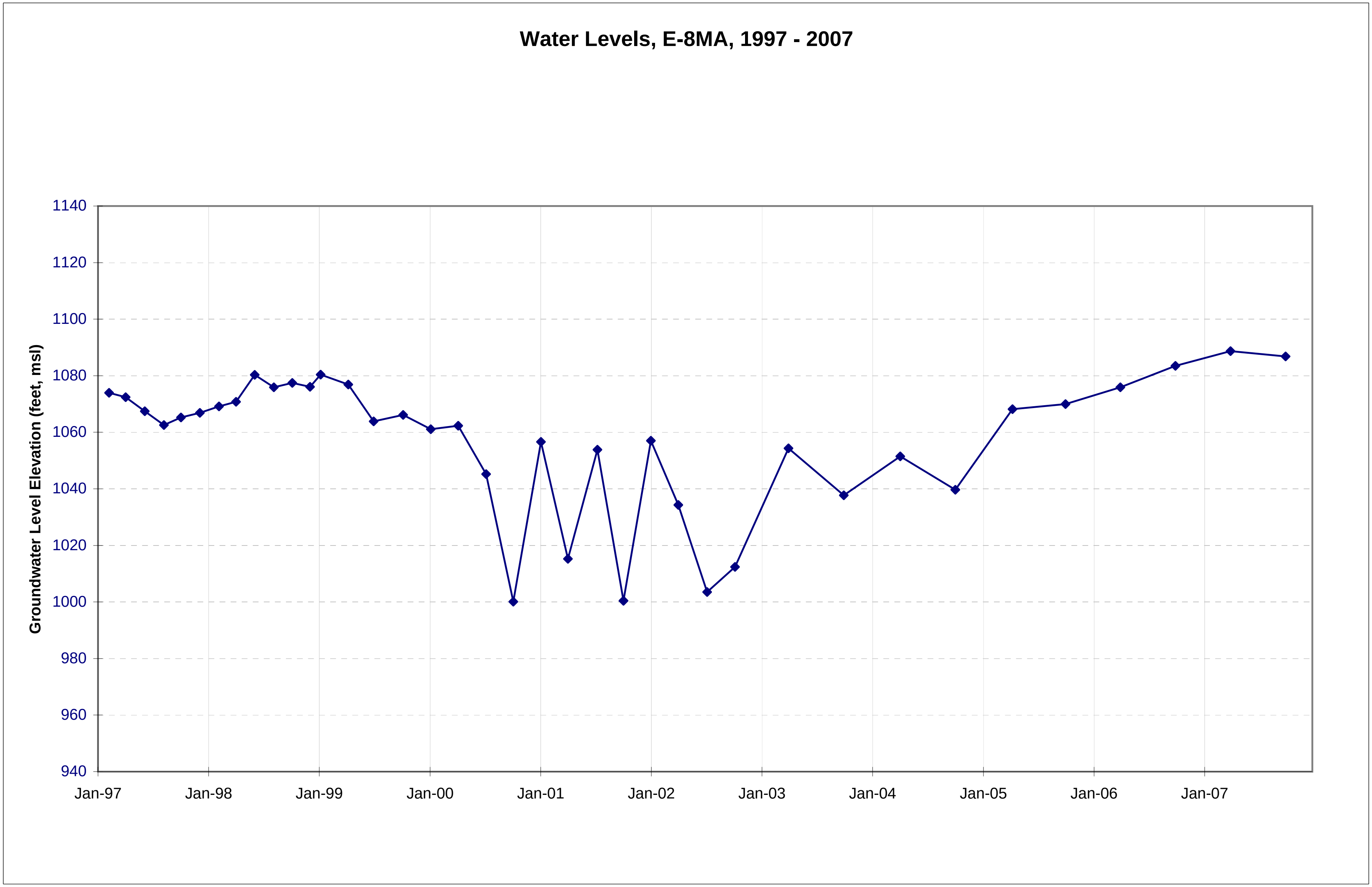
Water Levels, E-6UA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1180
1170
1160
1150
1140
1130
1120
1110
1100
1090
1080
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

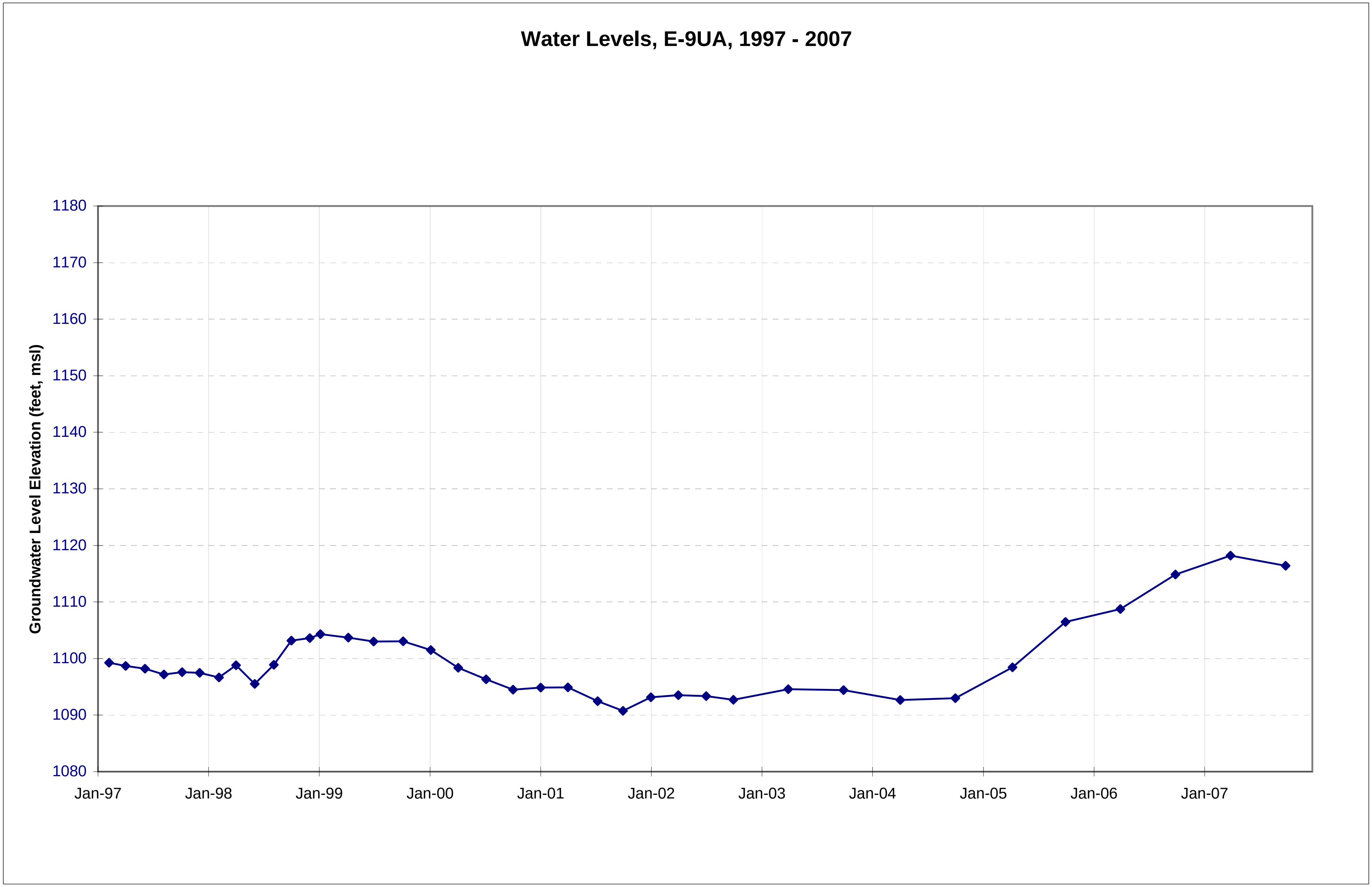


Water Levels, E-7LA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1080
1060
1040
1020
1000
980
960
940
920
900
880
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

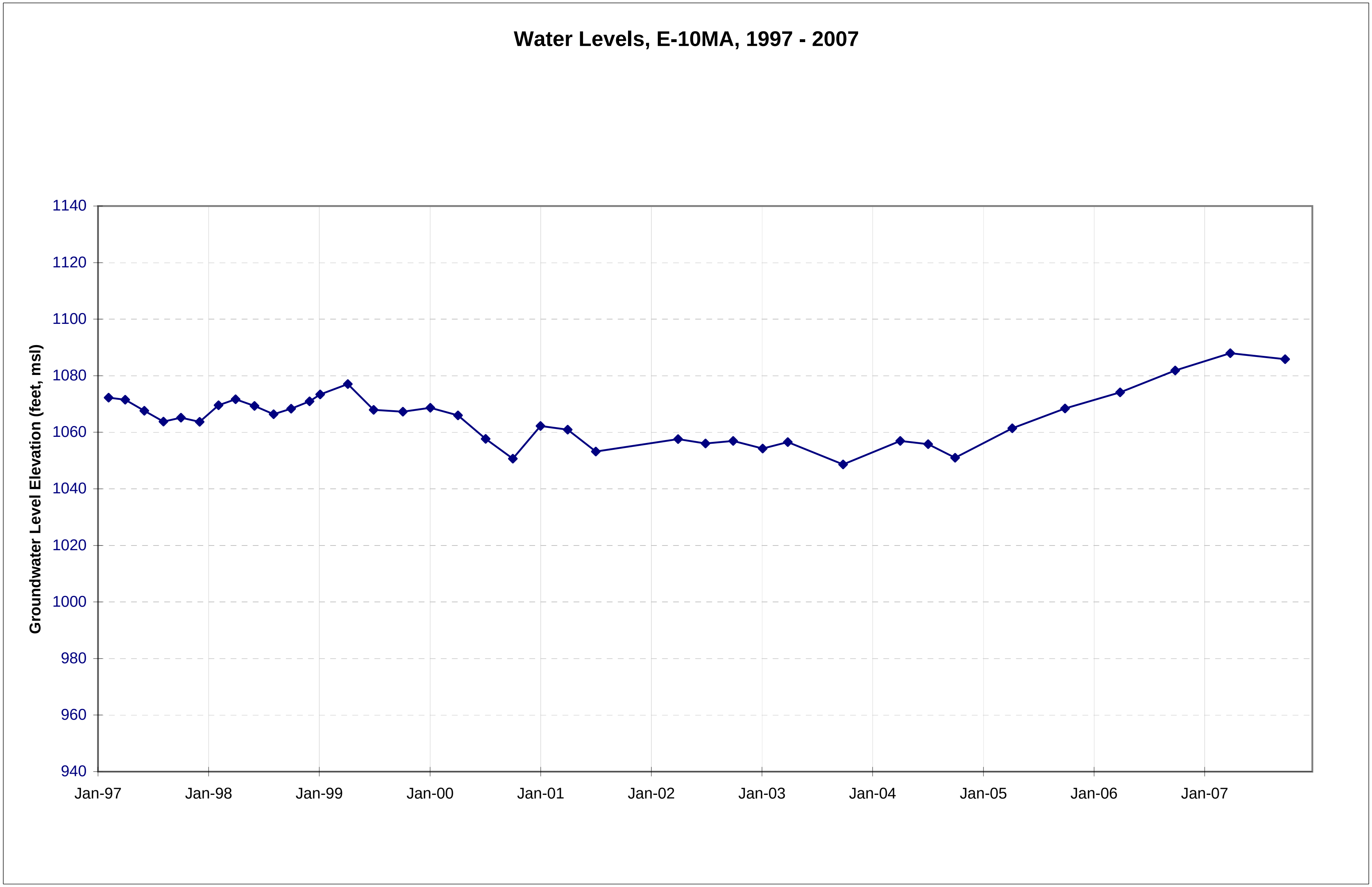
Water Levels, E-7UA, 1997 - 2007

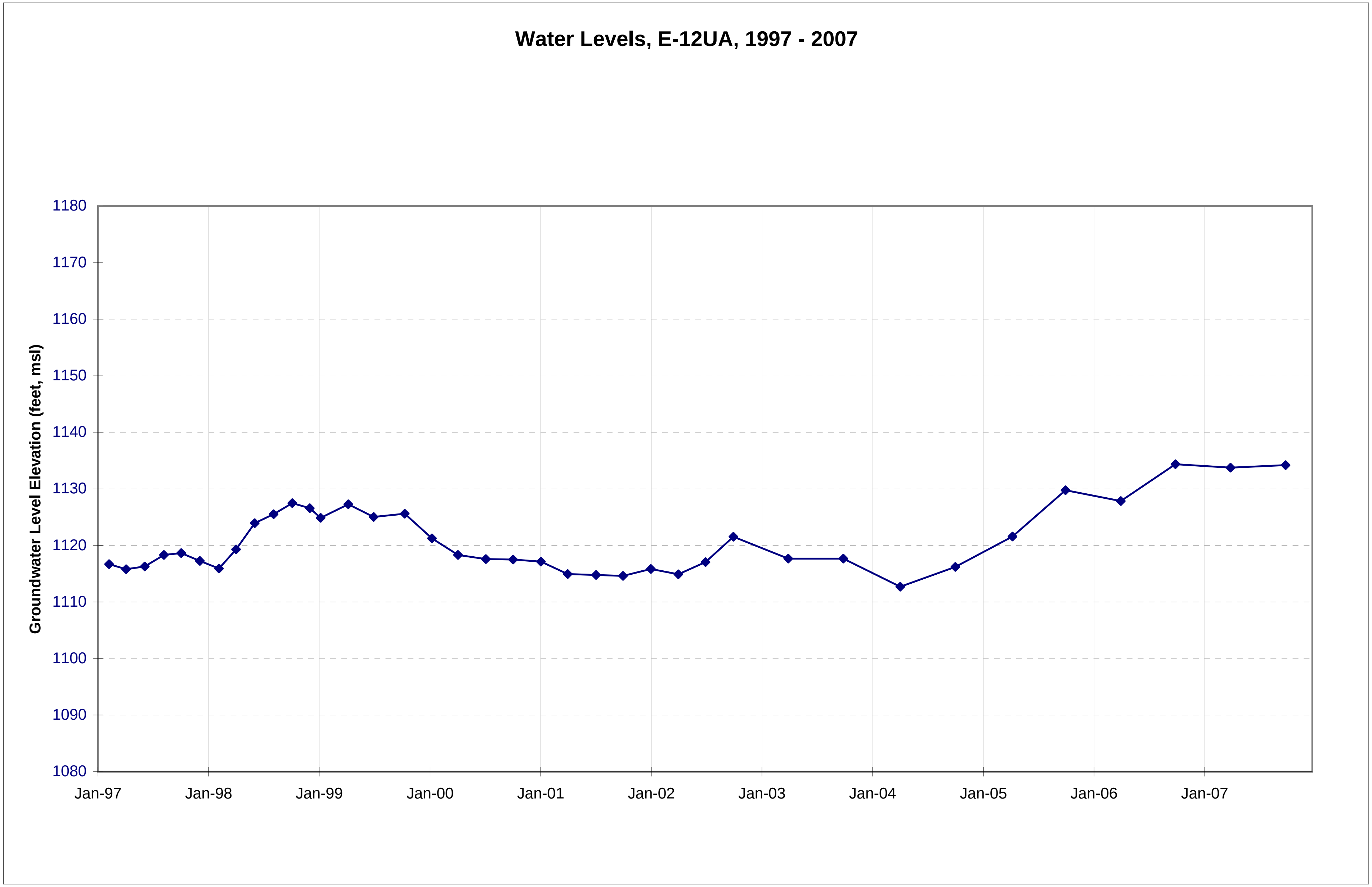



Water Levels, E-8MA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1140
1120
1100
1080
1060
1040
1020
1000
980
960
940
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

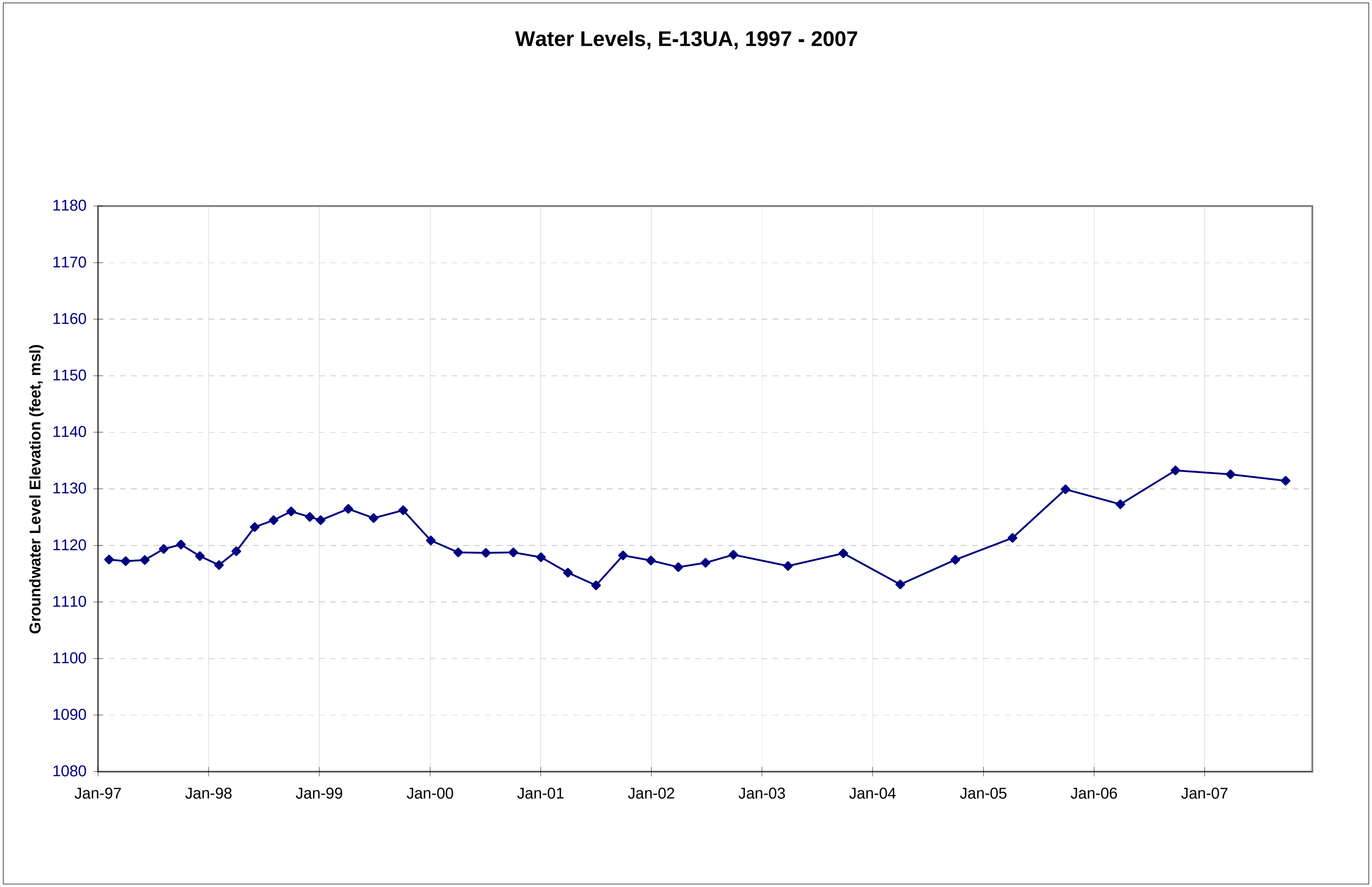


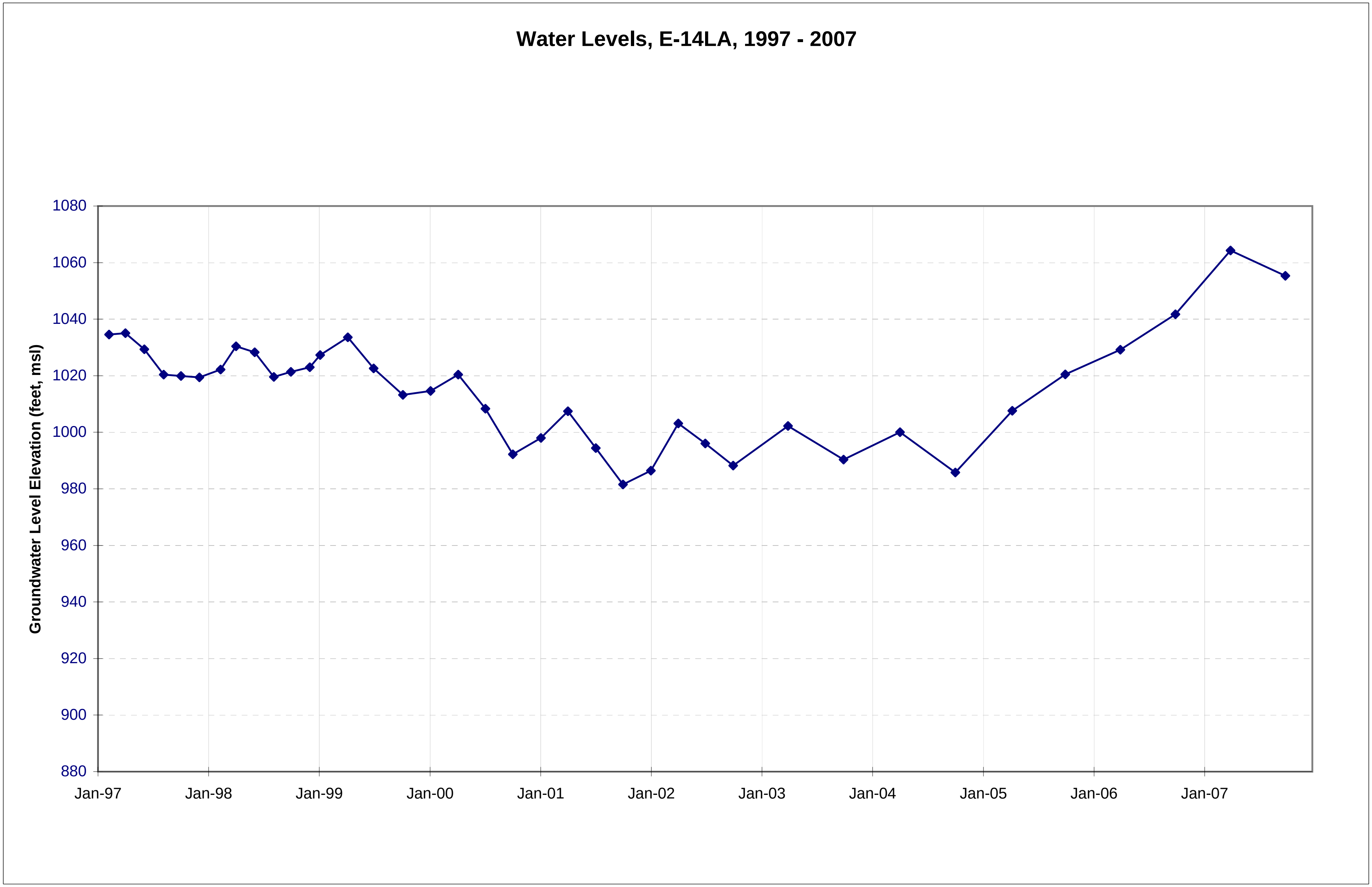
Water Levels, E-9UA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1180
1170
1160
1150
1140
1130
1120
1110
1100
1090
1080
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

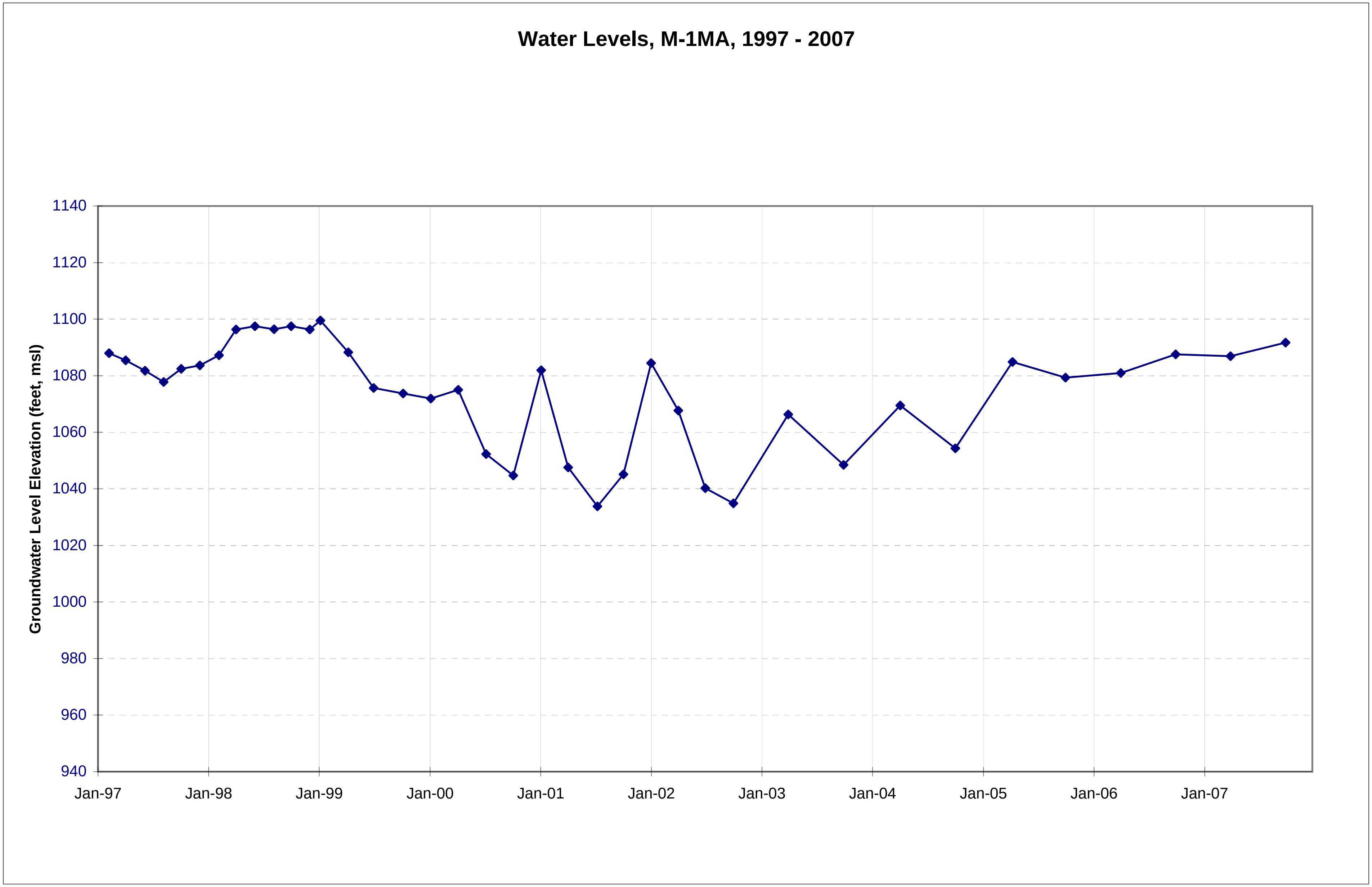

Water Levels, E-10MA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1140
1120
1100
1080
1060
1040
1020
1000
980
960
940
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

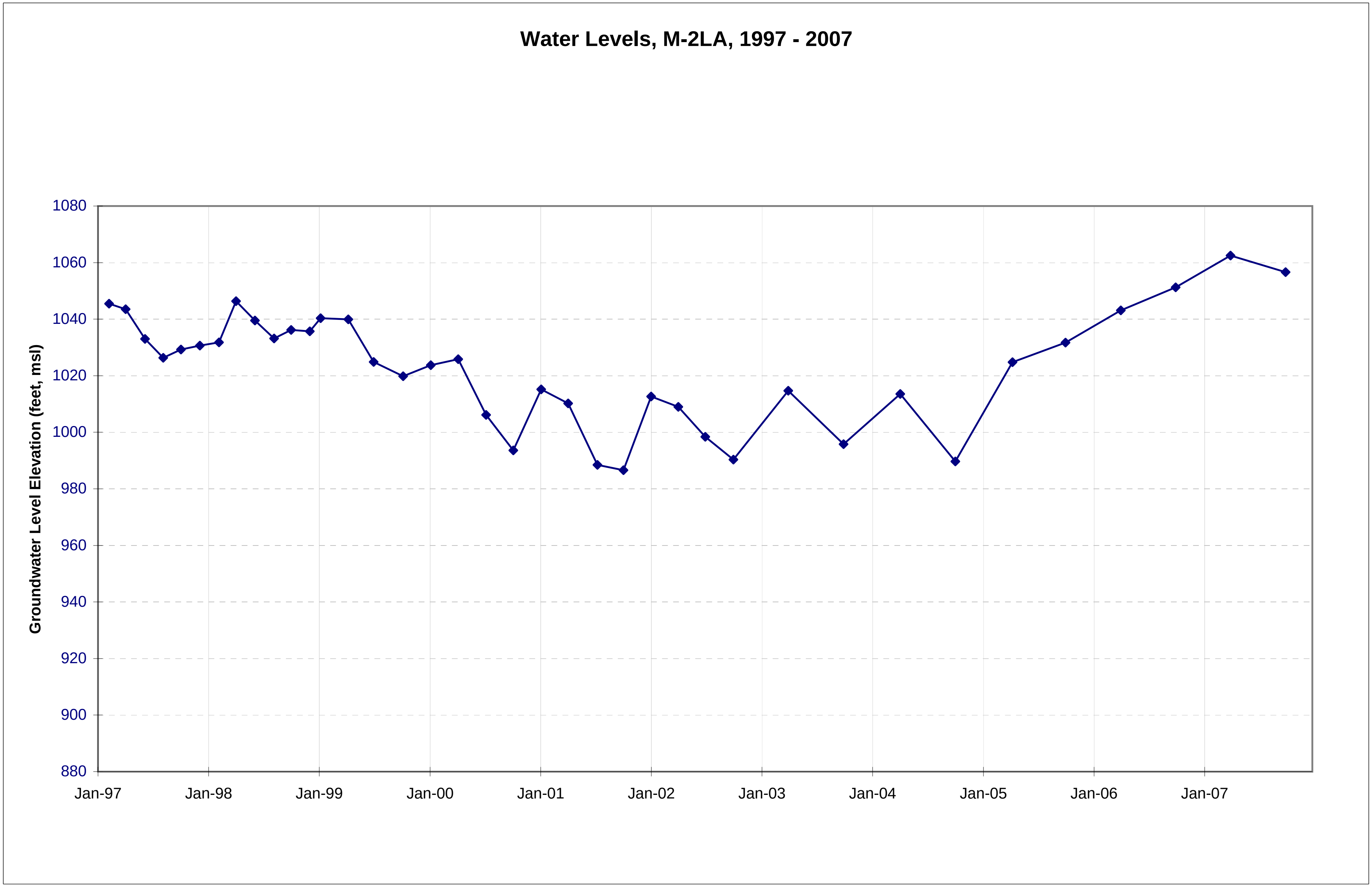


Water Levels, E-12UA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1180
1170
1160
1150
1140
1130
1120
1110
1100
1090
1080
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

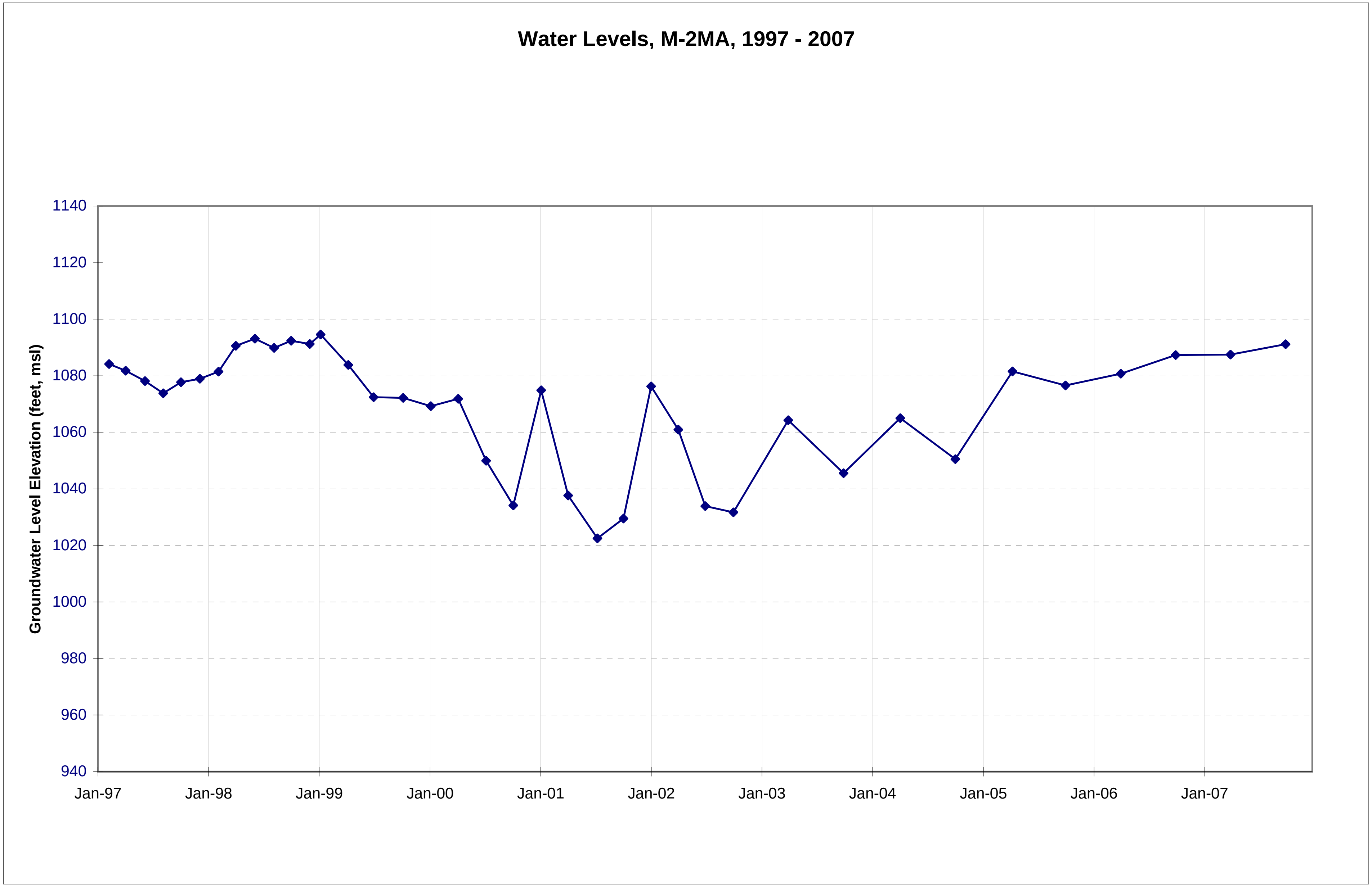

Water Levels, E-13UA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1180
1170
1160
1150
1140
1130
1120
1110
1100
1090
1080
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07


Water Levels, E-14LA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1080
1060
1040
1020
1000
980
960
940
920
900
880
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07


Water Levels, M-1MA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1140
1120
1100
1080
1060
1040
1020
1000
980
960
940
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07



Water Levels, M-2LA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1080
1060
1040
1020
1000
980
960
940
920
900
880
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07


Water Levels, M-2MA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1140
1120
1100
1080
1060
1040
1020
1000
980
960
940
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
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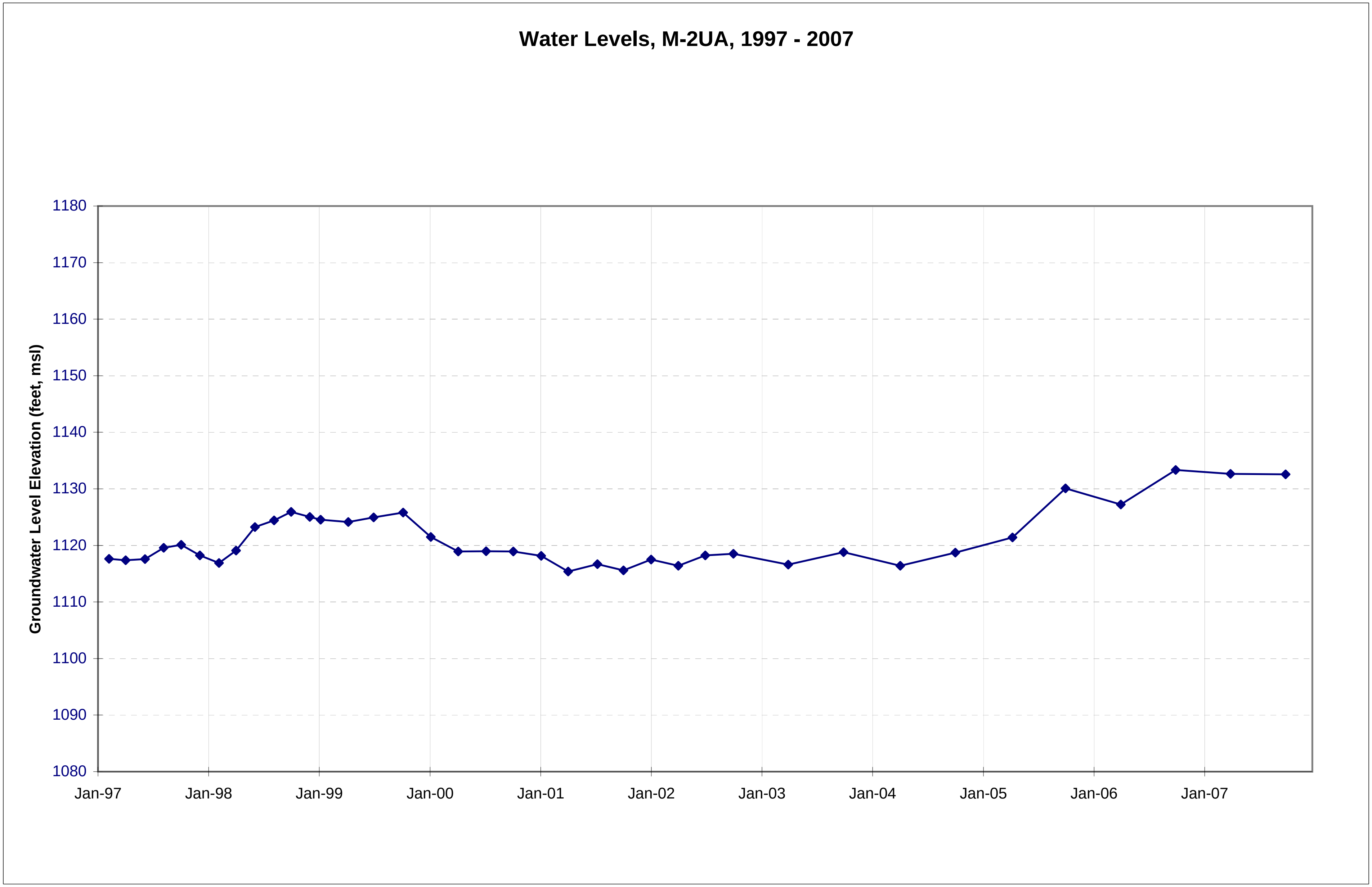
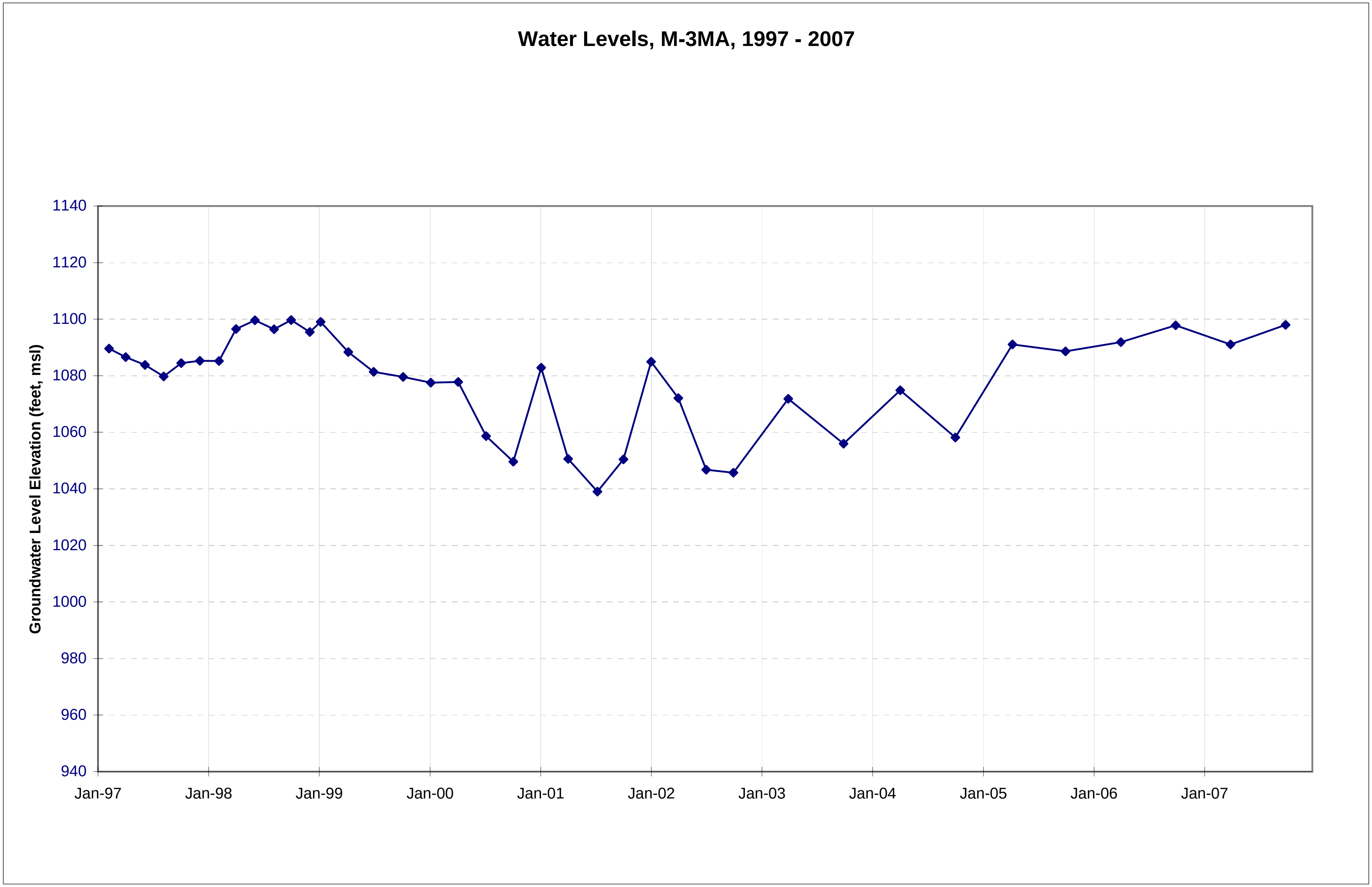
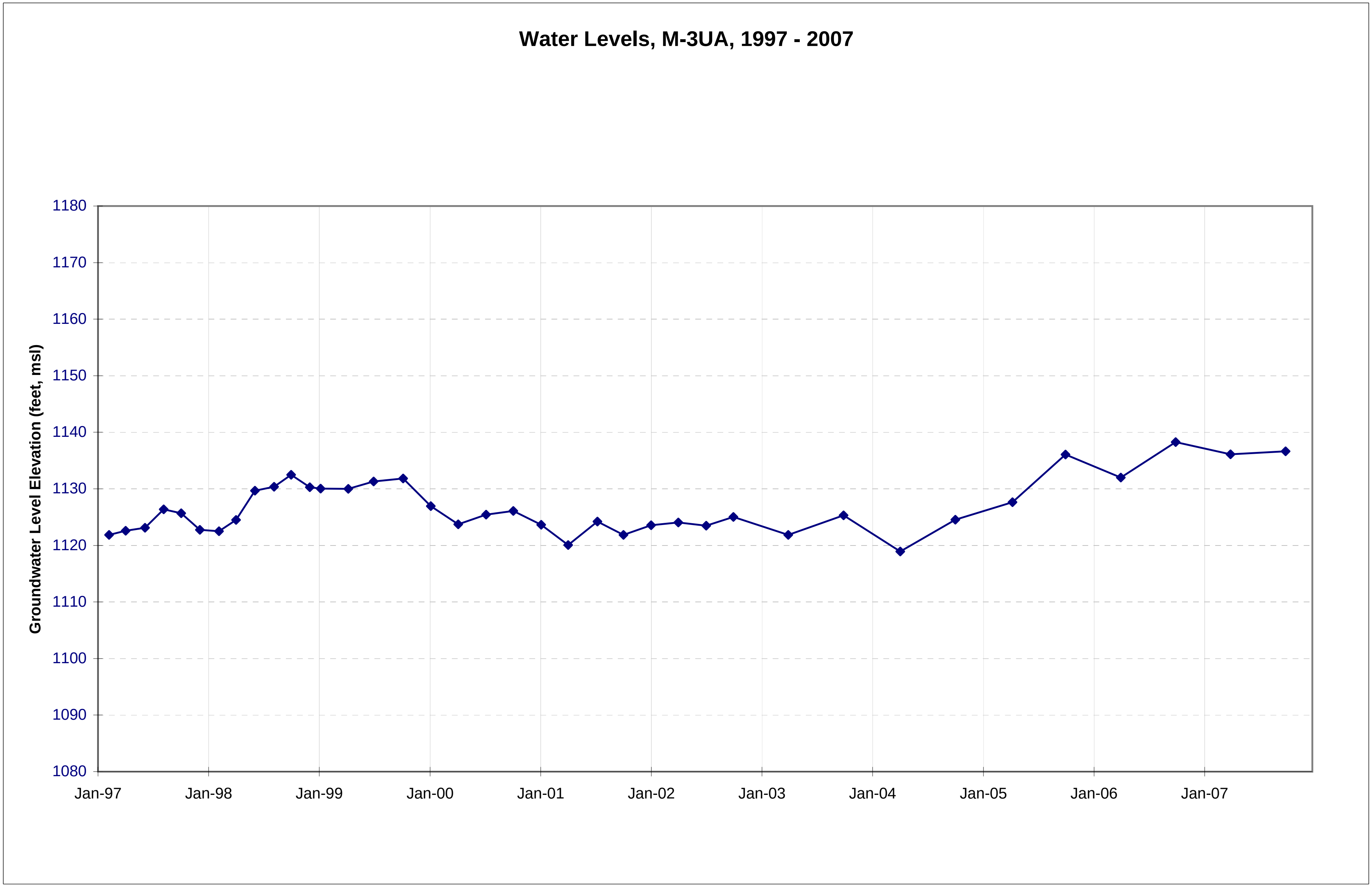
Jan-04
Jan-05
Jan-06
Jan-07



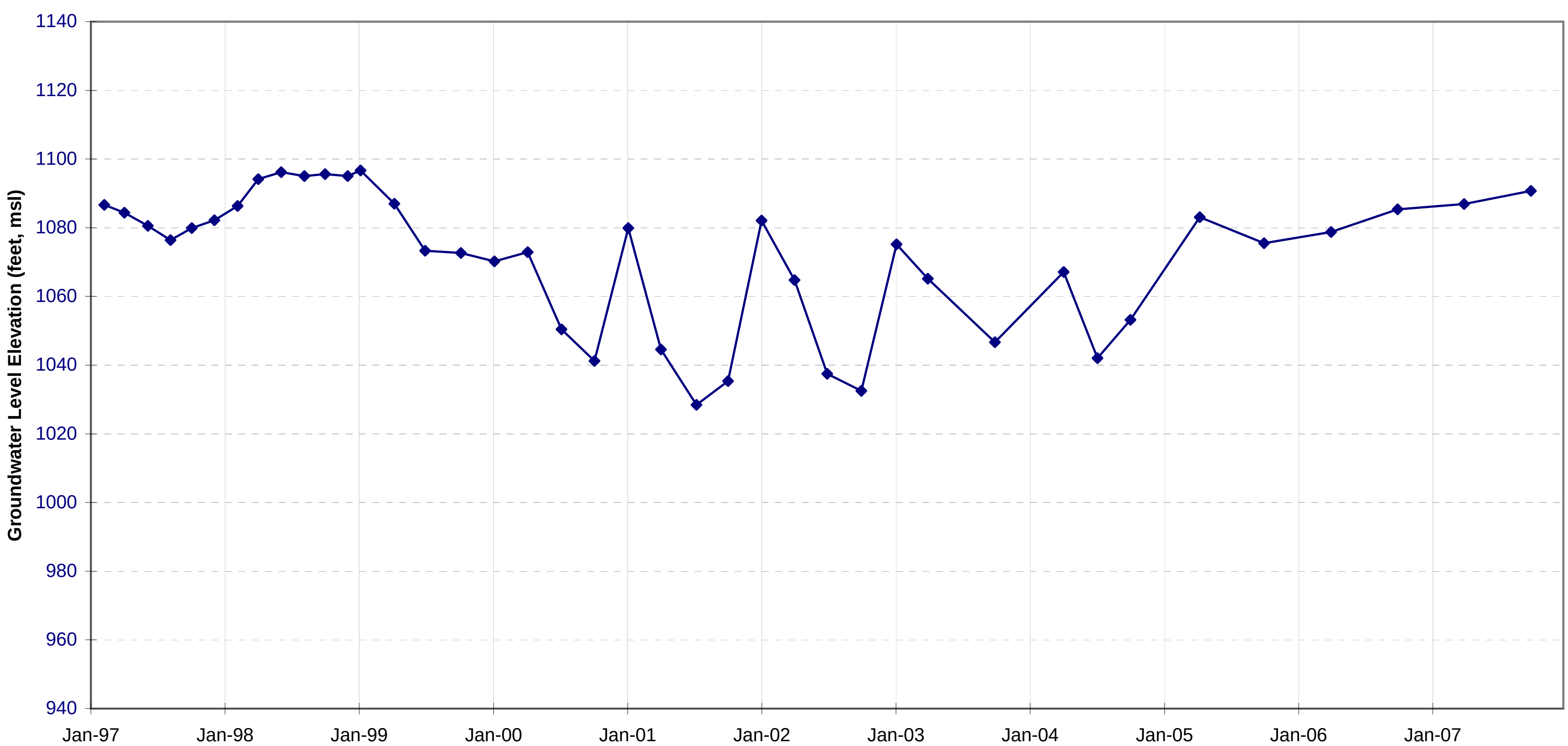
Water Levels, M-2UA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1180
1170
1160
1150
1140
1130
1120
1110
1100
1090
1080
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

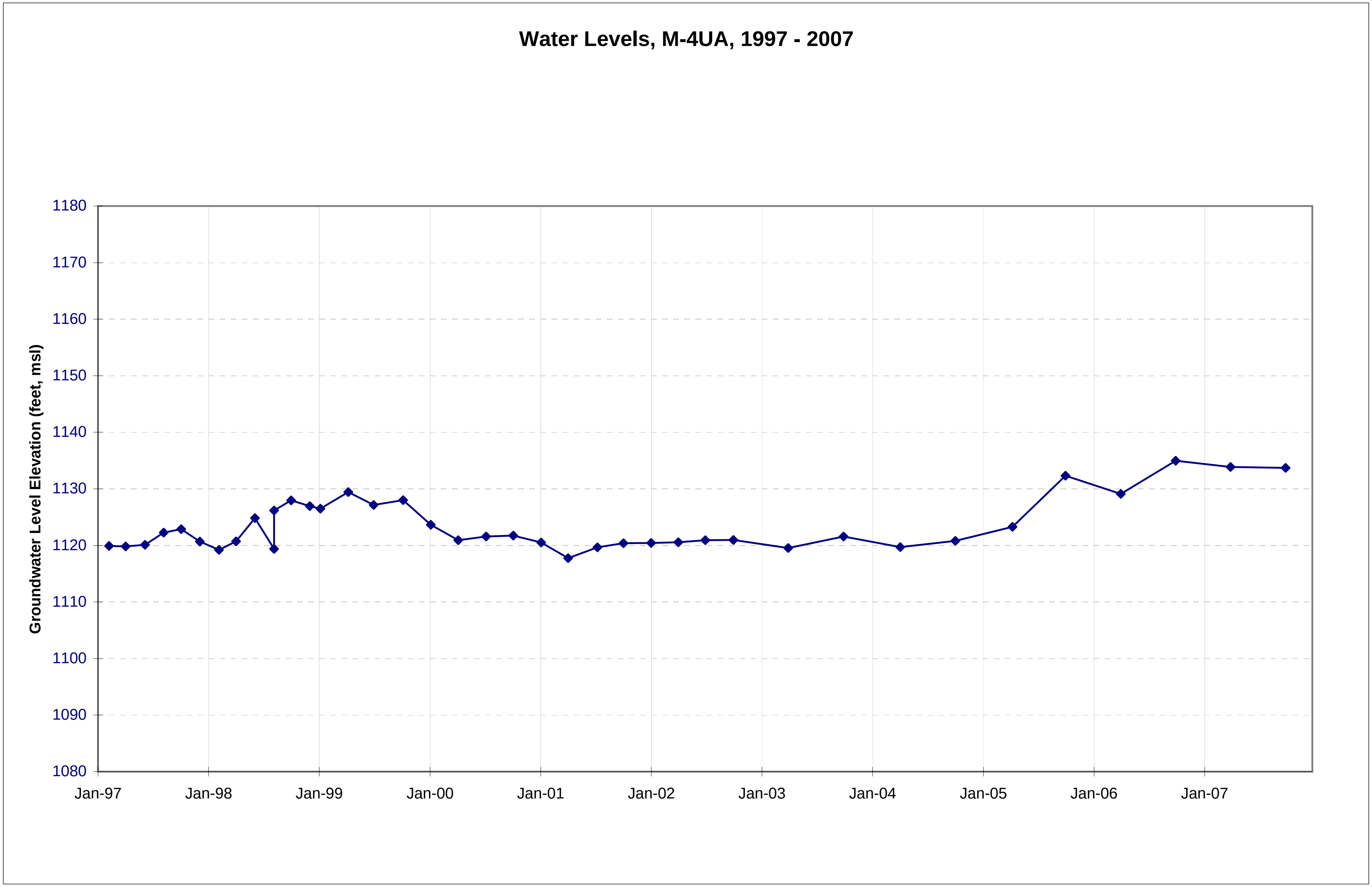

Water Levels, M-3MA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1140
1120
1100
1080
1060
1040
1020
1000
980
960
940
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

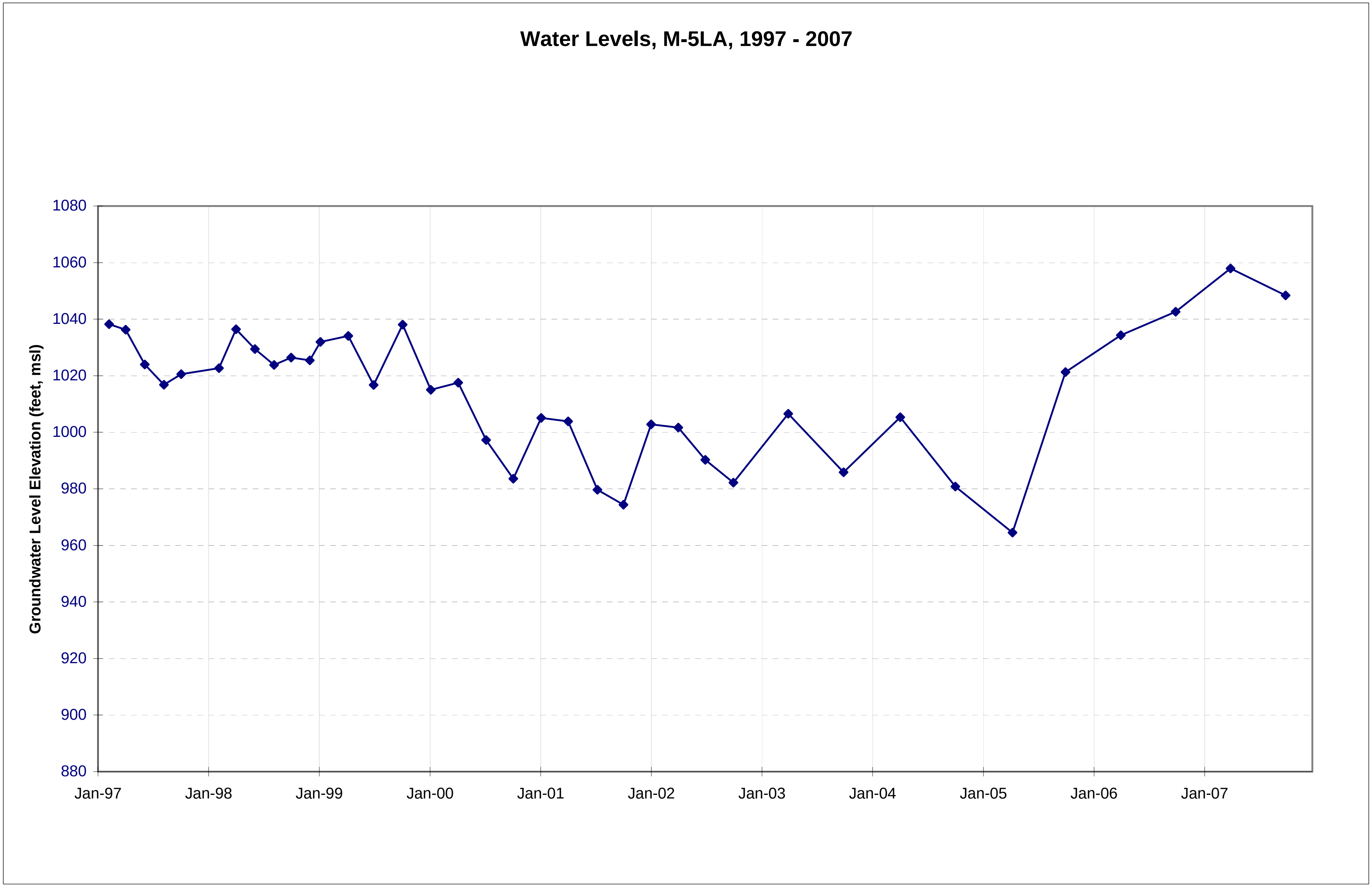


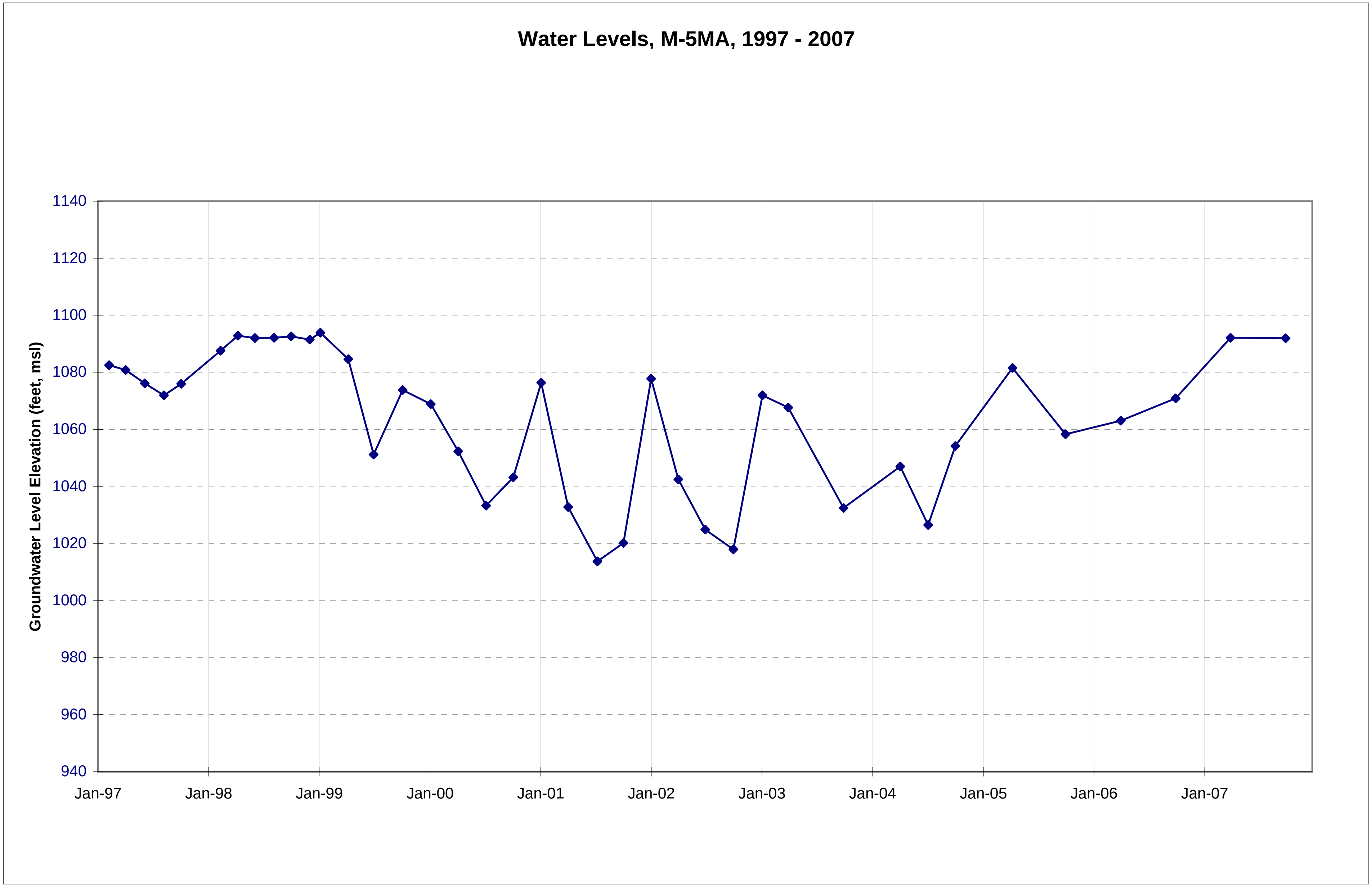
Water Levels, M-3UA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1180
1170
1160
1150
1140
1130
1120
1110
1100
1090
1080
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

Water Levels, M-4MA, 1997 - 2007

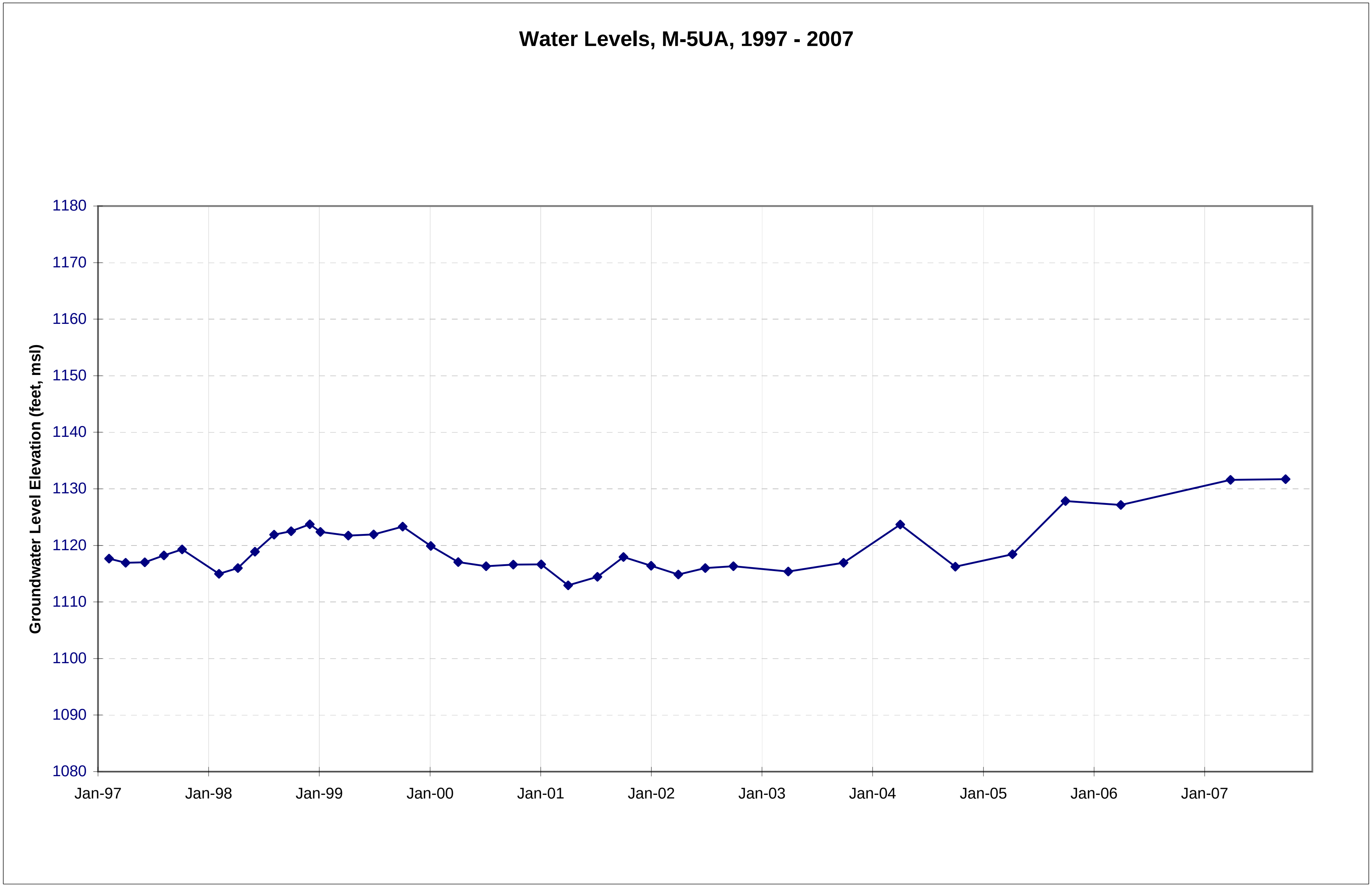



Water Levels, M-4UA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1180
1170
1160
1150
1140
1130
1120
1110
1100
1090
1080
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

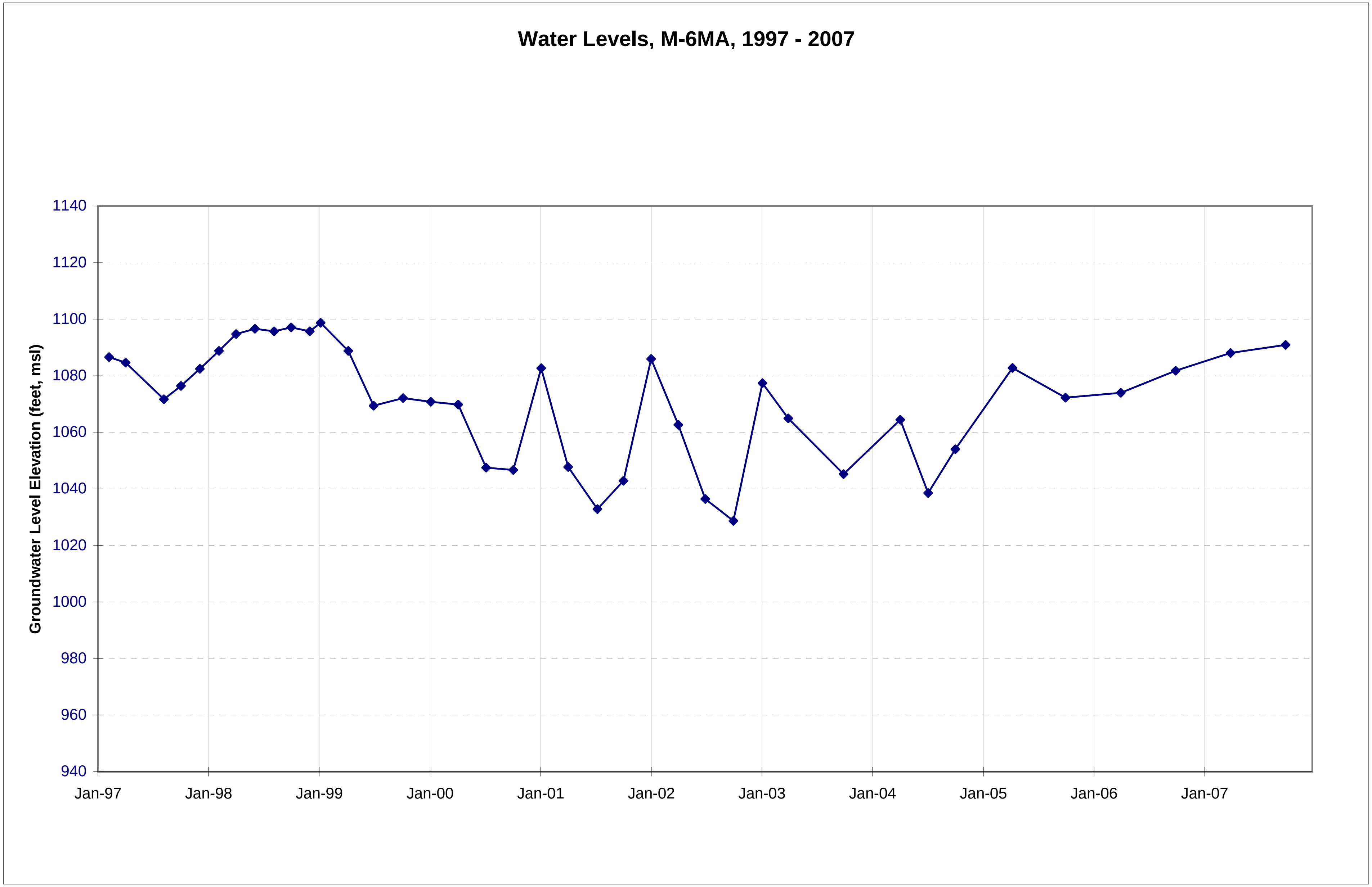

Water Levels, M-5LA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1080
1060
1040
1020
1000
980
960
940
920
900
880
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

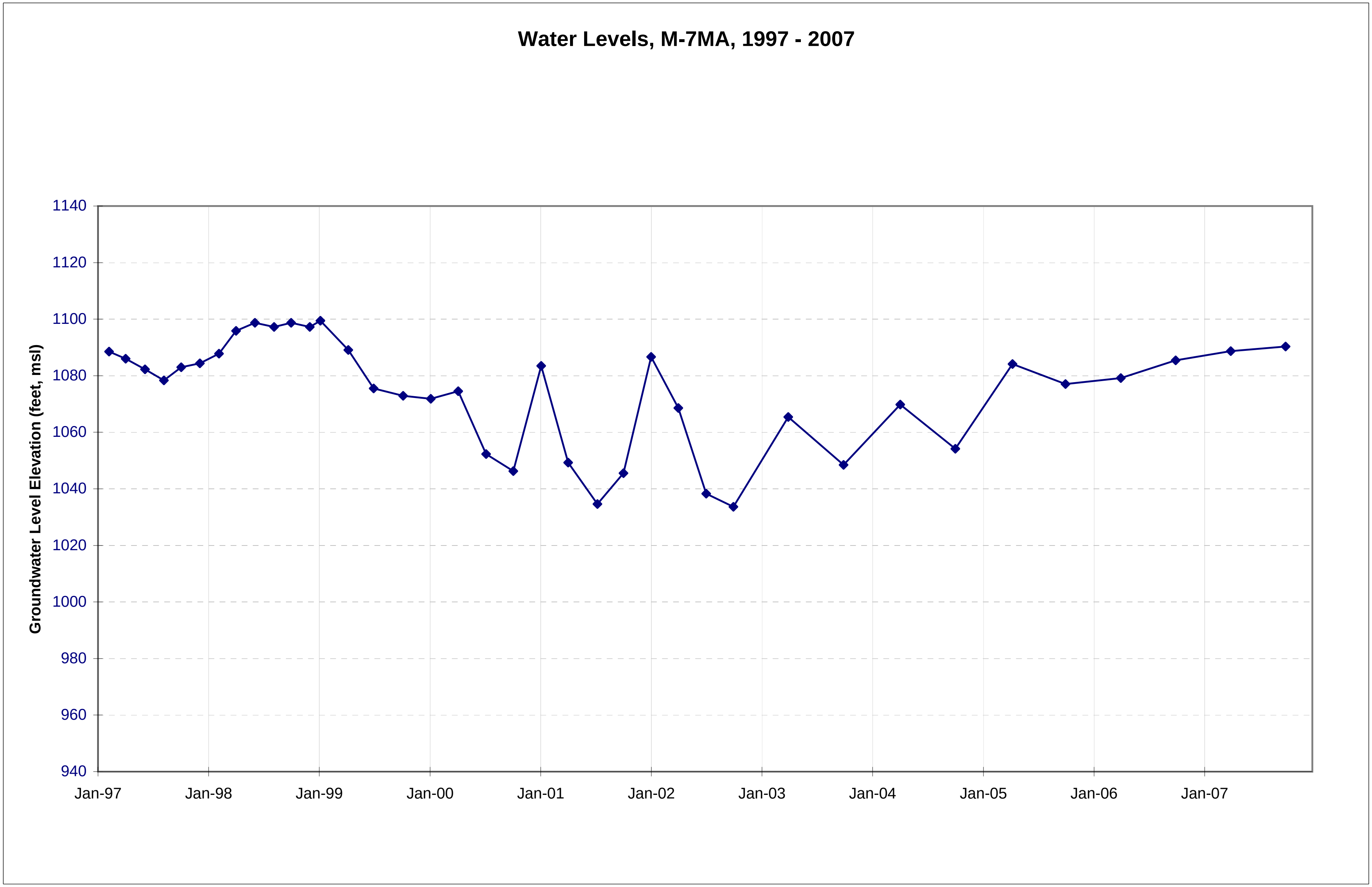


Water Levels, M-5MA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1140
1120
1100
1080
1060
1040
1020
1000
980
960
940
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

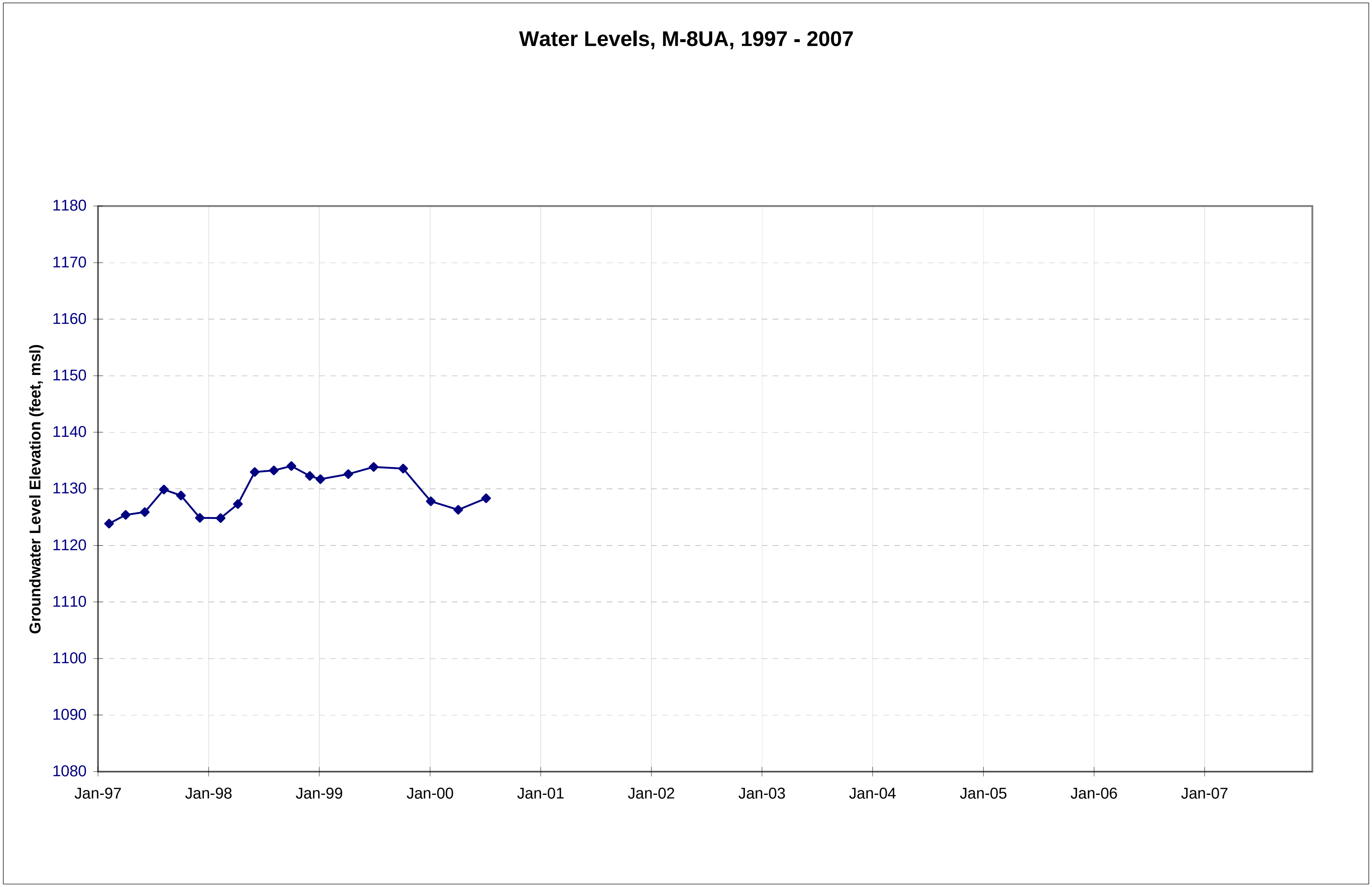


Water Levels, M-5UA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1180
1170
1160
1150
1140
1130
1120
1110
1100
1090
1080
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

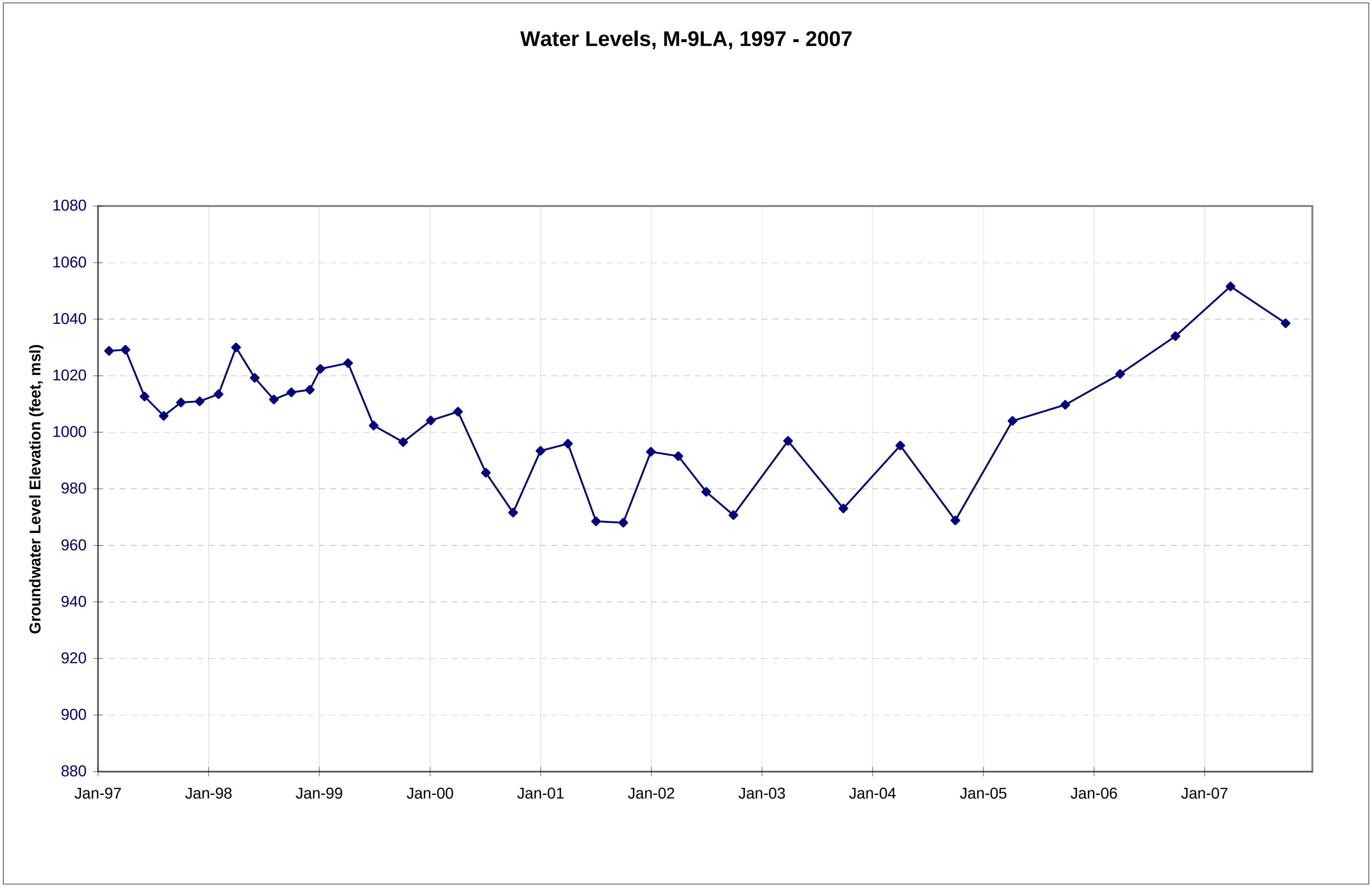

Water Levels, M-6MA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1140
1120
1100
1080
1060
1040
1020
1000
980
960
940
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

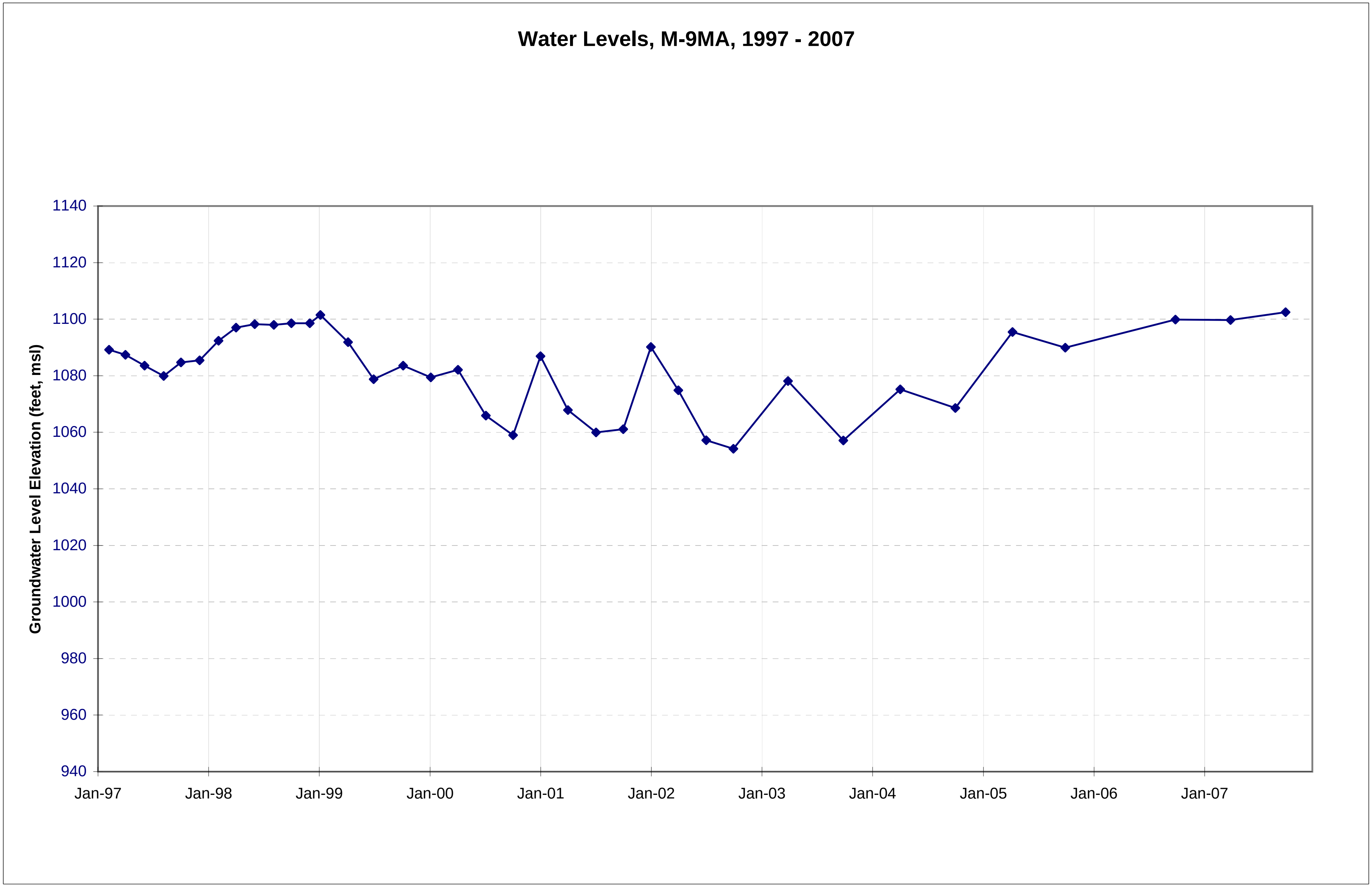


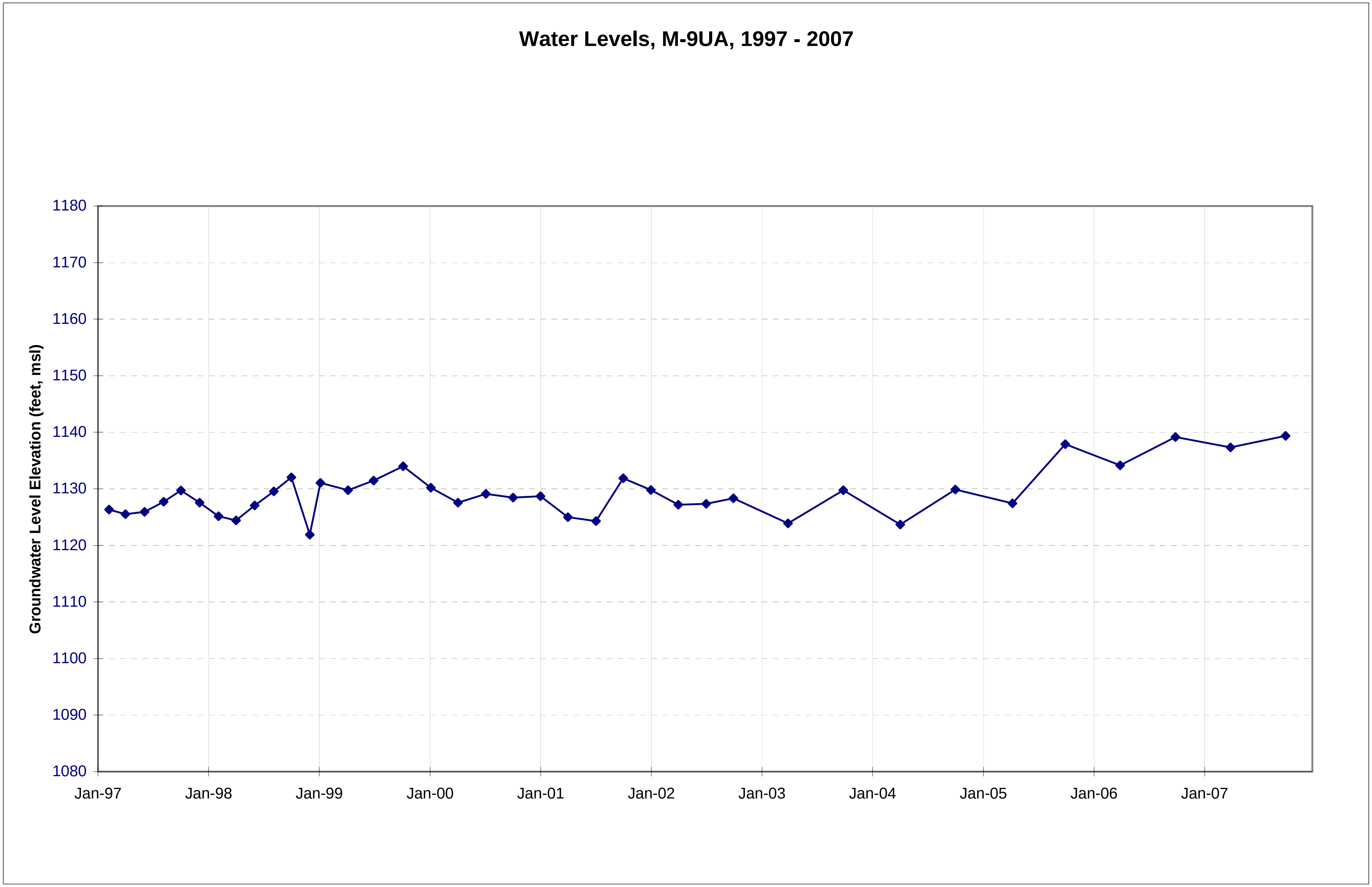
Water Levels, M-7MA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1140
1120
1100
1080
1060
1040
1020
1000
980
960
940
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07



Water Levels, M-8UA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1180
1170
1160
1150
1140
1130
1120
1110
1100
1090
1080
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07


Water Levels, M-9LA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1080
1060
1040
1020
1000
980
960
940
920
900
880
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07


Water Levels, M-9MA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1140
1120
1100
1080
1060
1040
1020
1000
980
960
940
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07



Water Levels, M-9UA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1180
1170
1160
1150
1140
1130
1120
1110
1100
1090
1080
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
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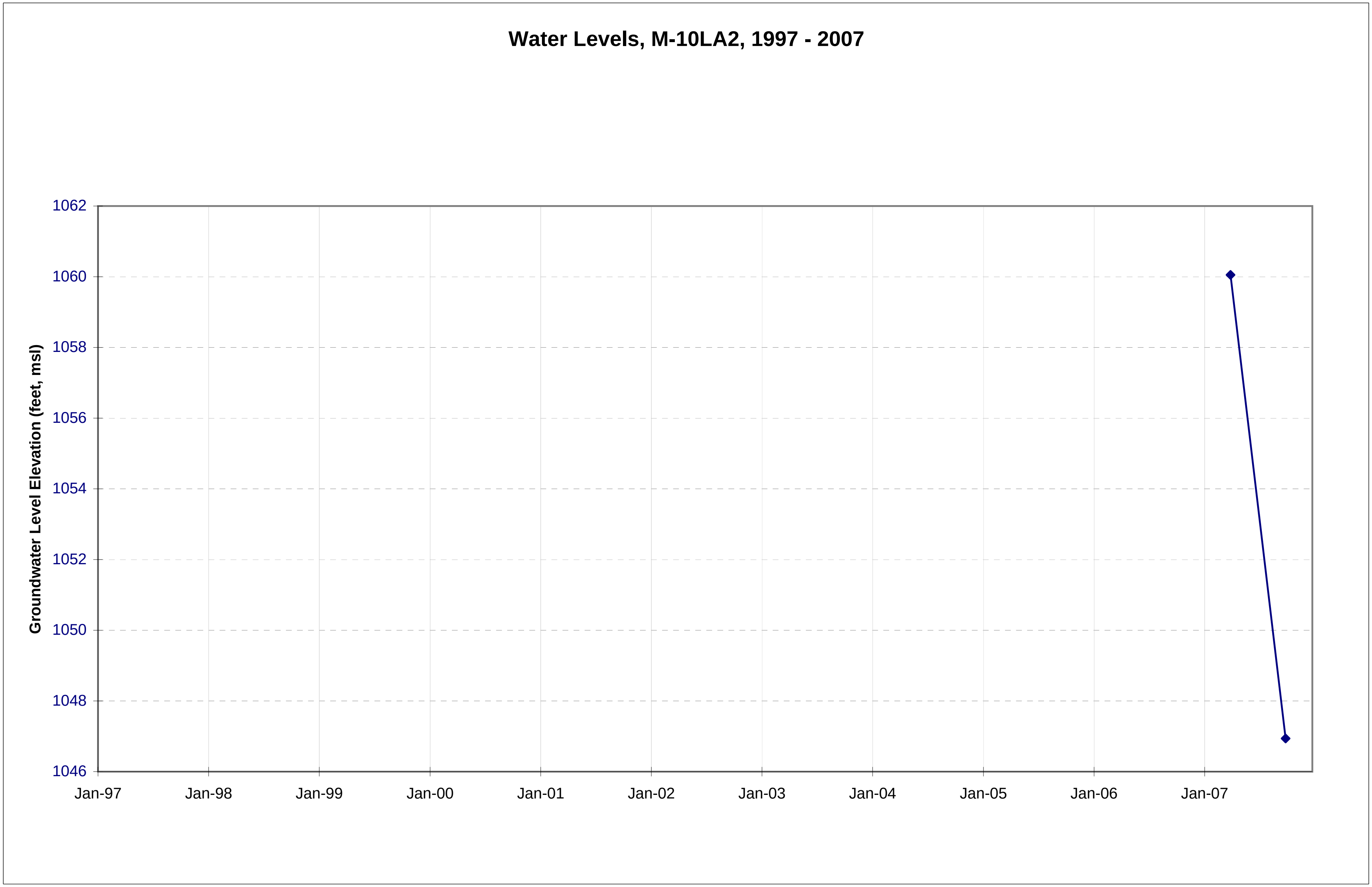
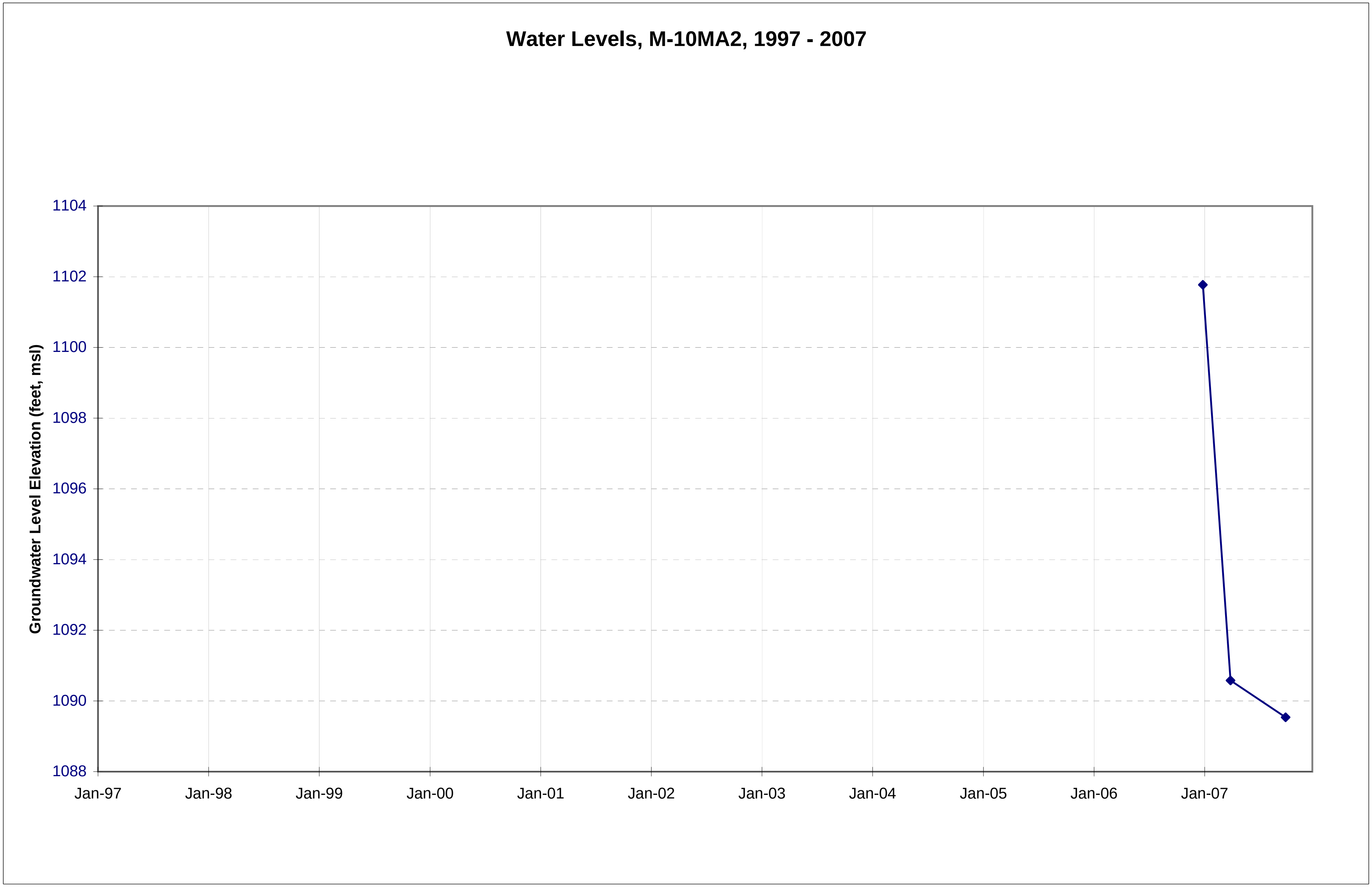
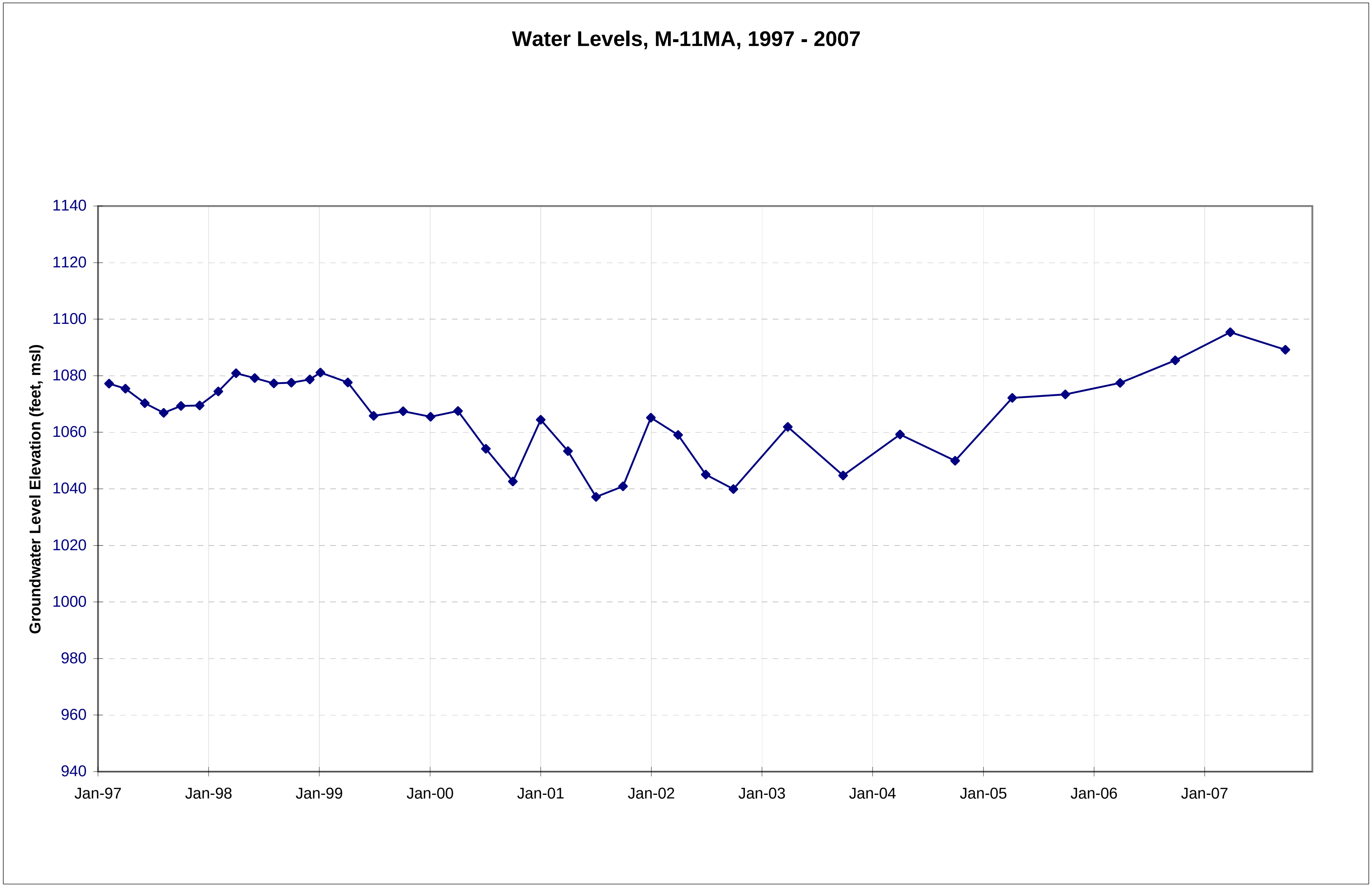
Jan-05
Jan-06
Jan-07


Water Levels, M-10LA2, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1062
1060
1058
1056
1054
1052
1050
1048
1046
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07


Water Levels, M-10MA2, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1104
1102
1100
1098
1096
1094
1092
1090
1088
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07


Water Levels, M-11MA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1140
1120
1100
1080
1060
1040
1020
1000
980
960
940
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
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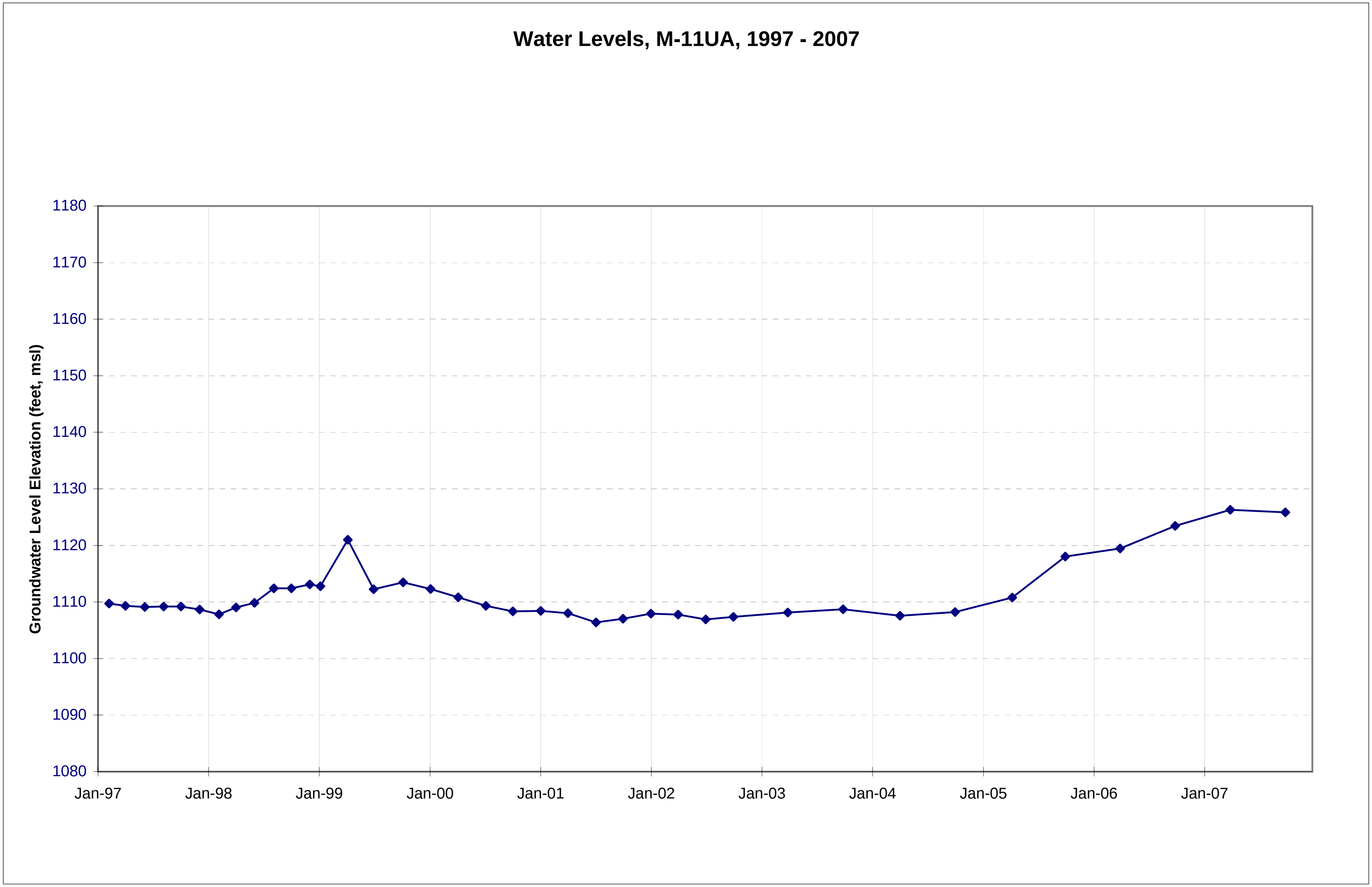
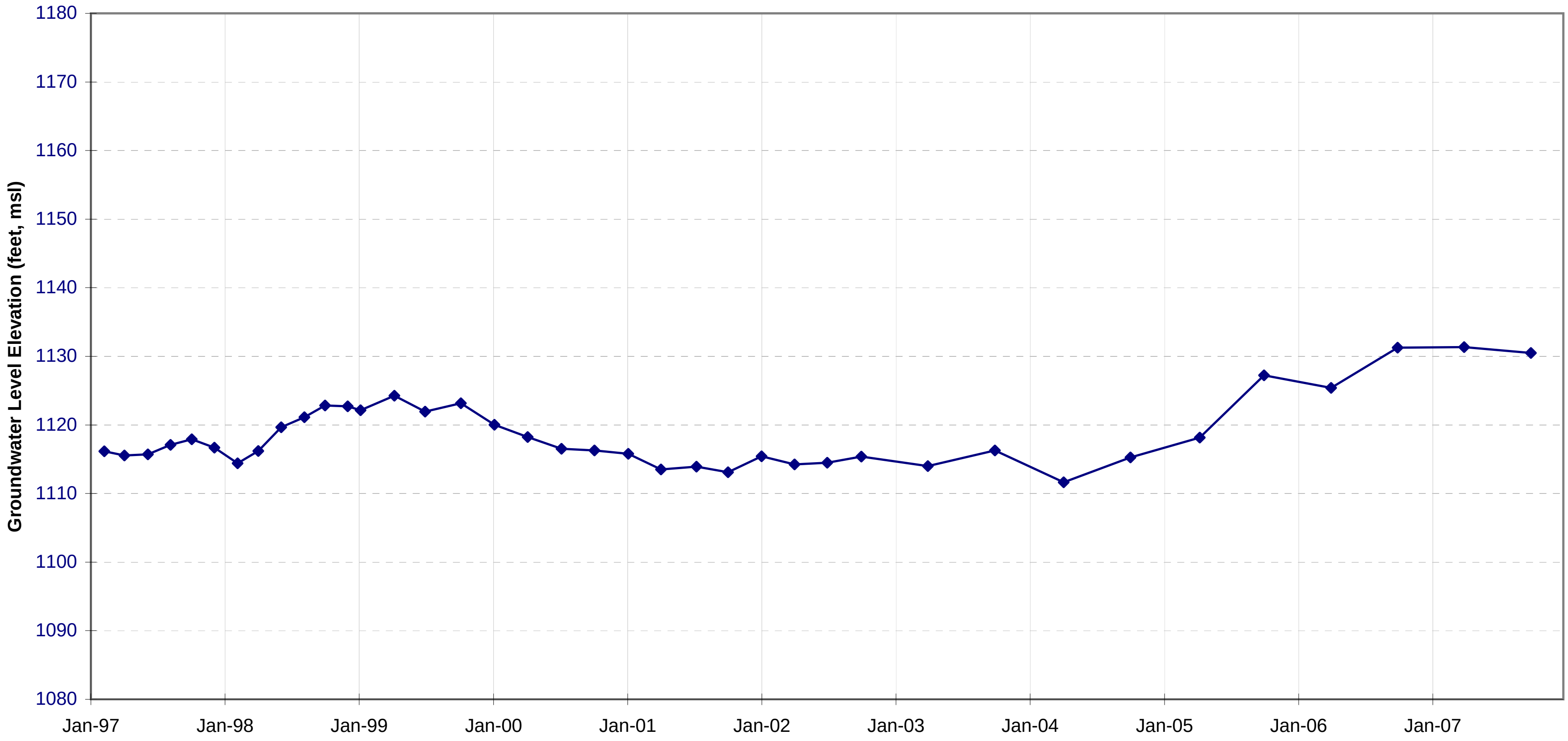
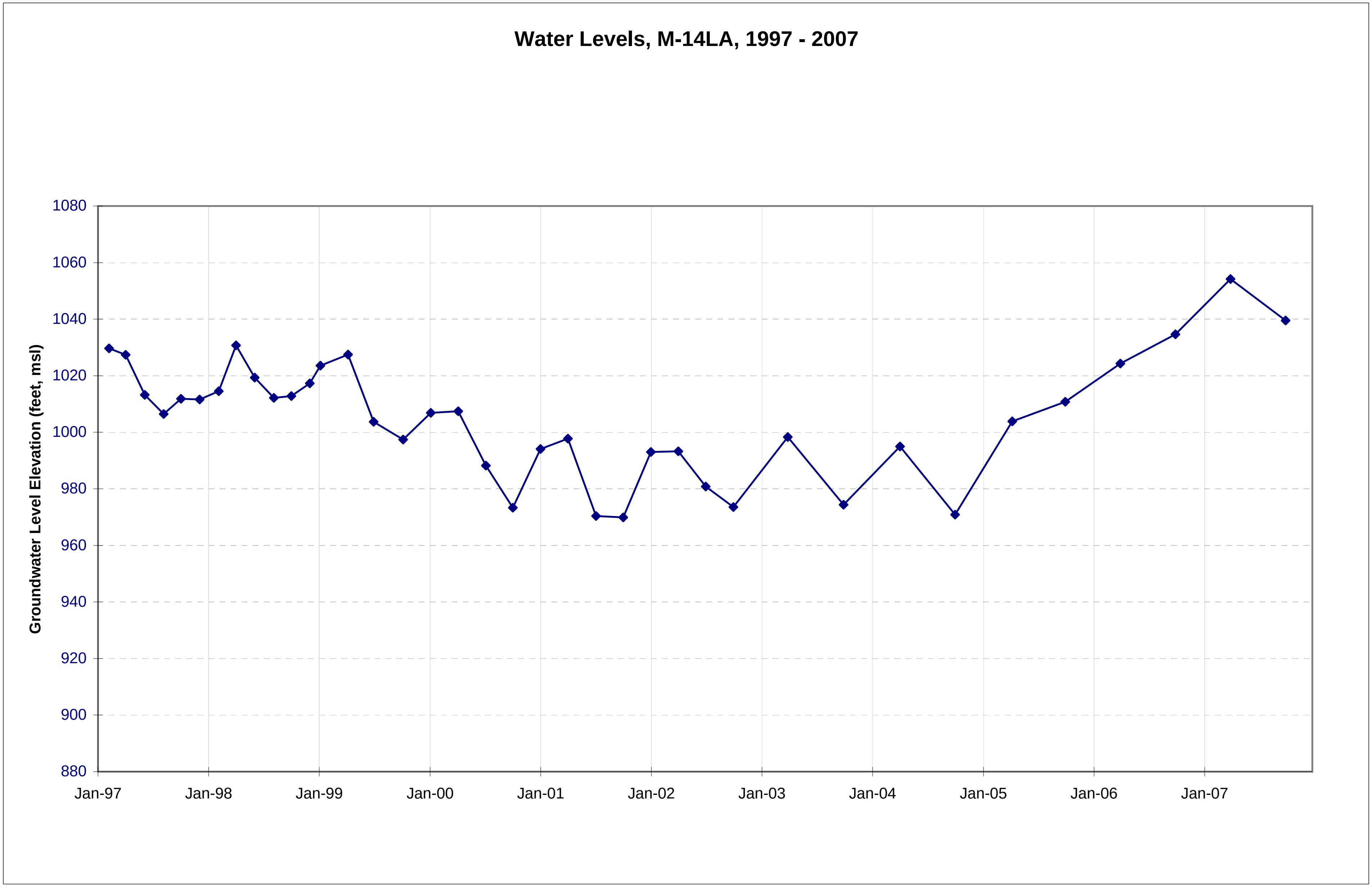
Jan-05
Jan-06
Jan-07



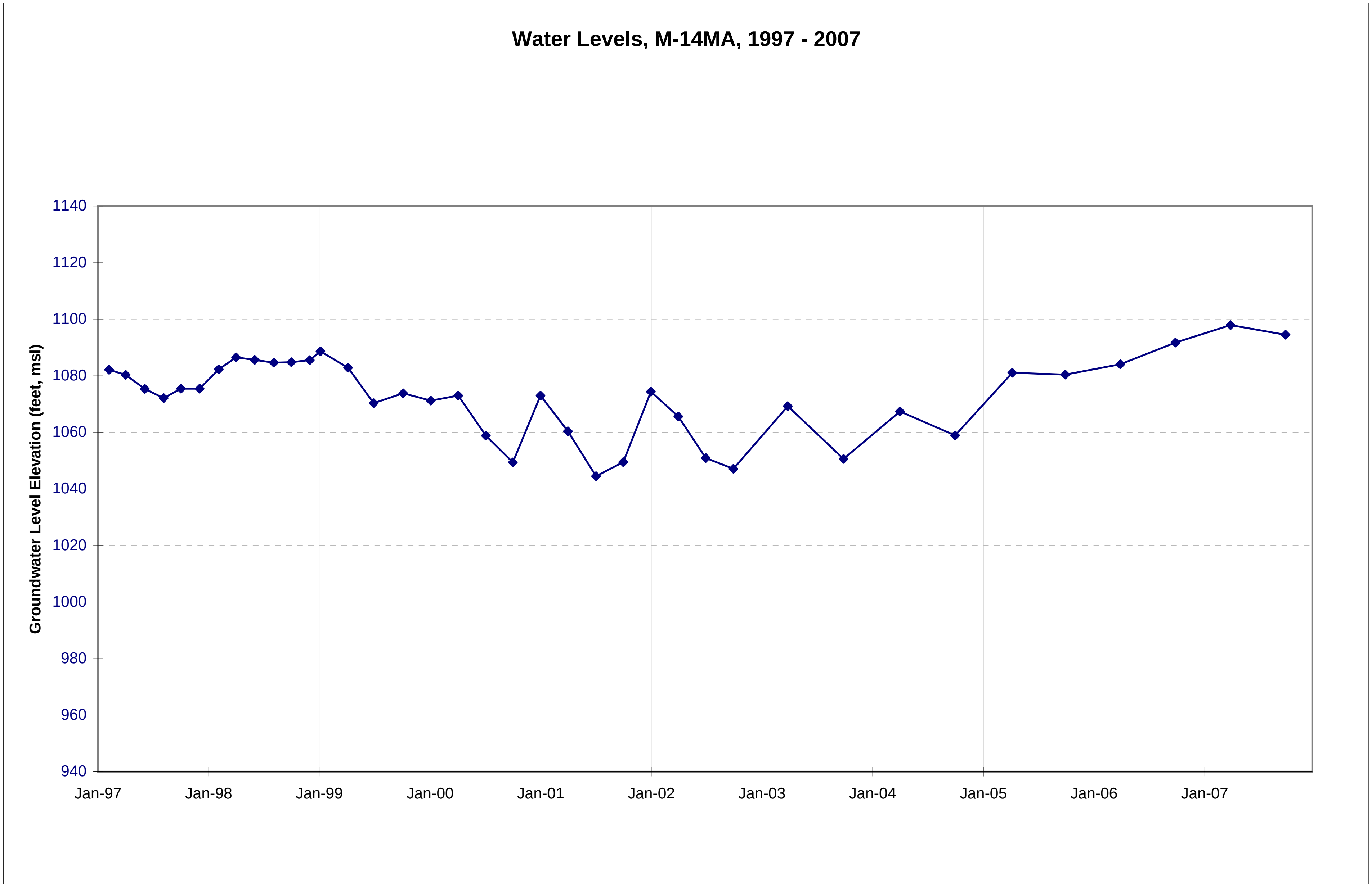
Water Levels, M-11UA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1180
1170
1160
1150
1140
1130
1120
1110
1100
1090
1080
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

Water Levels, M-13UA, 1997 - 2007





Water Levels, M-14LA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1080
1060
1040
1020
1000
980
960
940
920
900
880
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07


Water Levels, M-14MA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1140
1120
1100
1080
1060
1040
1020
1000
980
960
940
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
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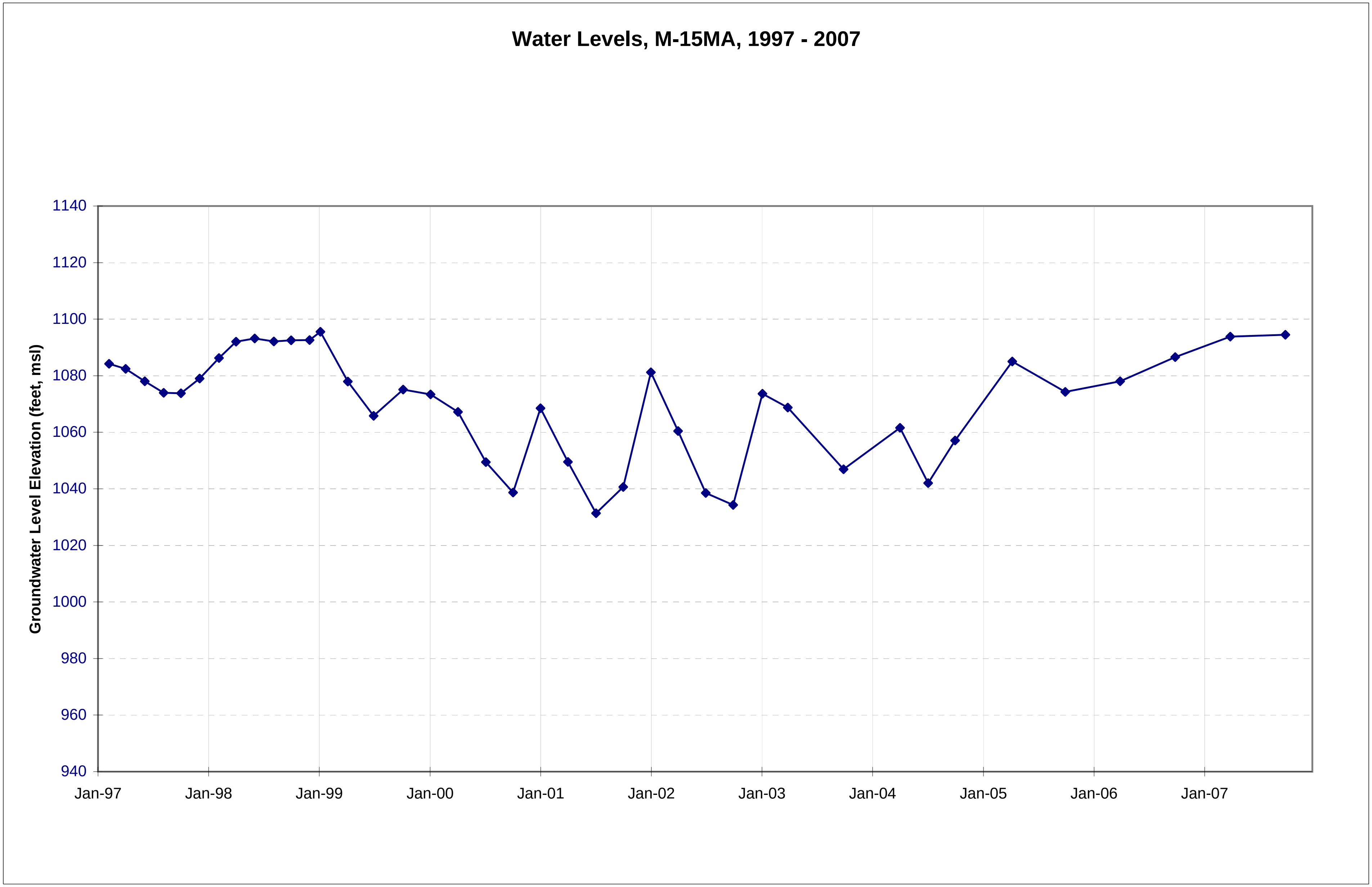
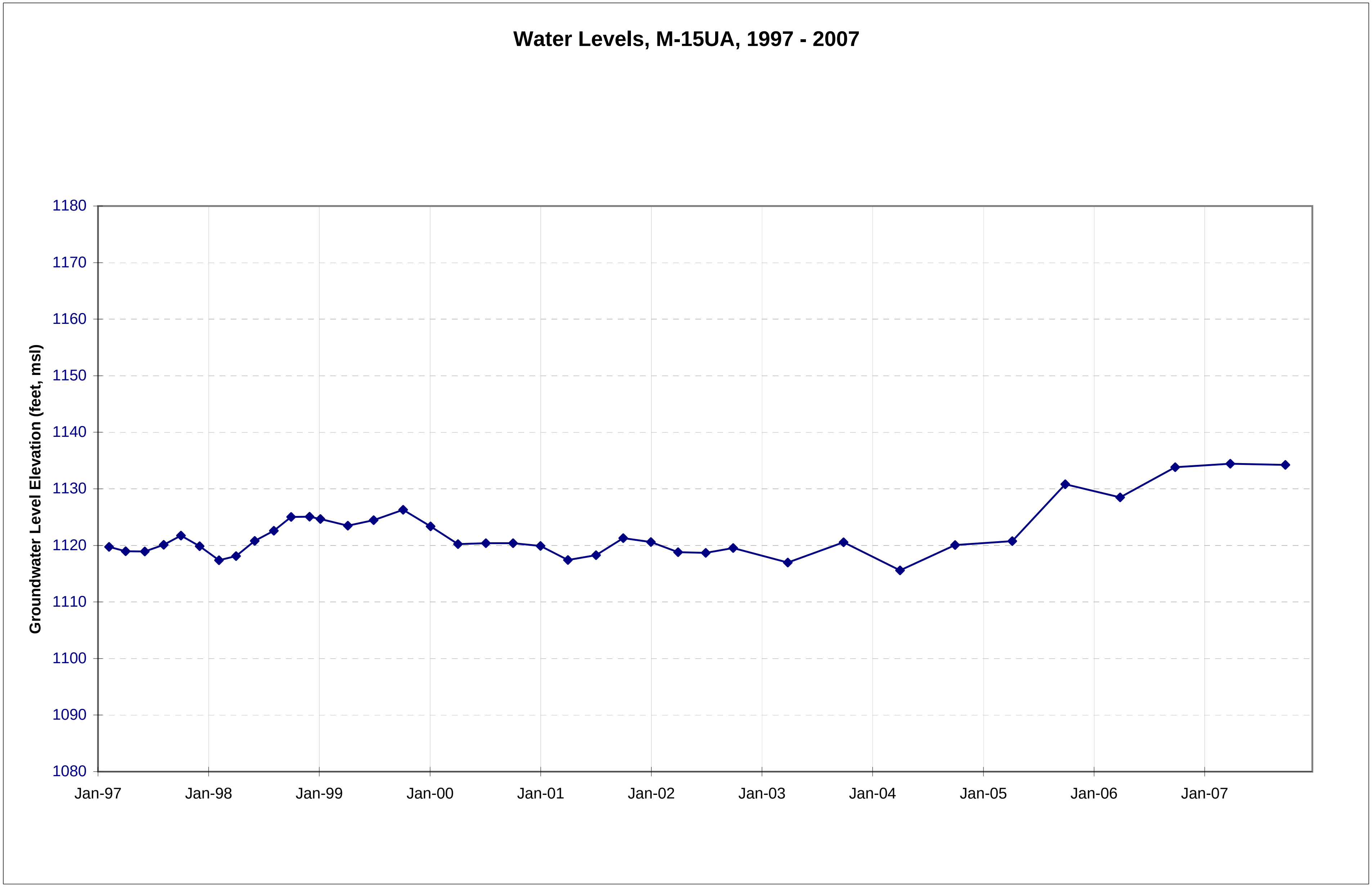
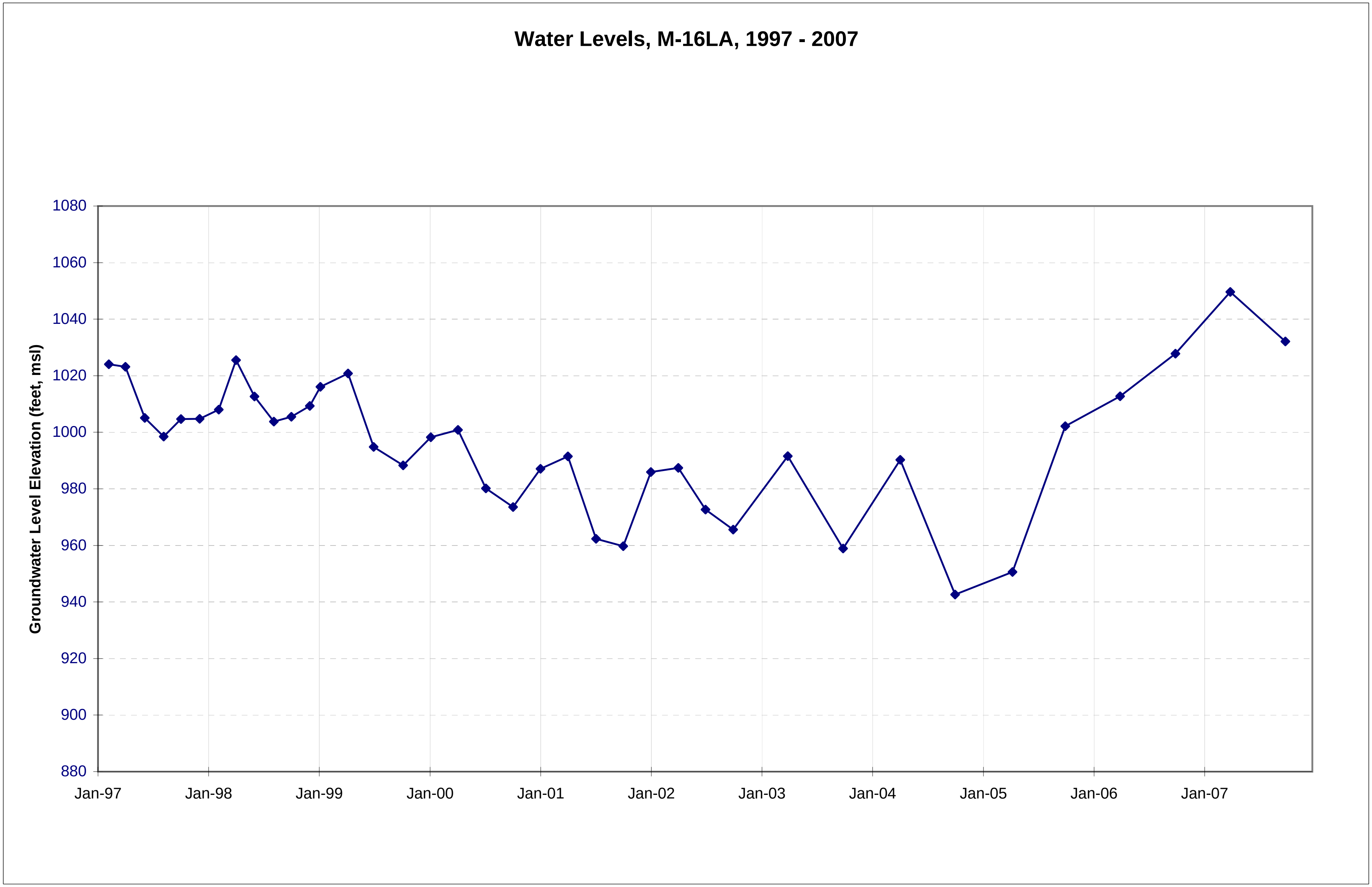
Jan-05
Jan-06
Jan-07



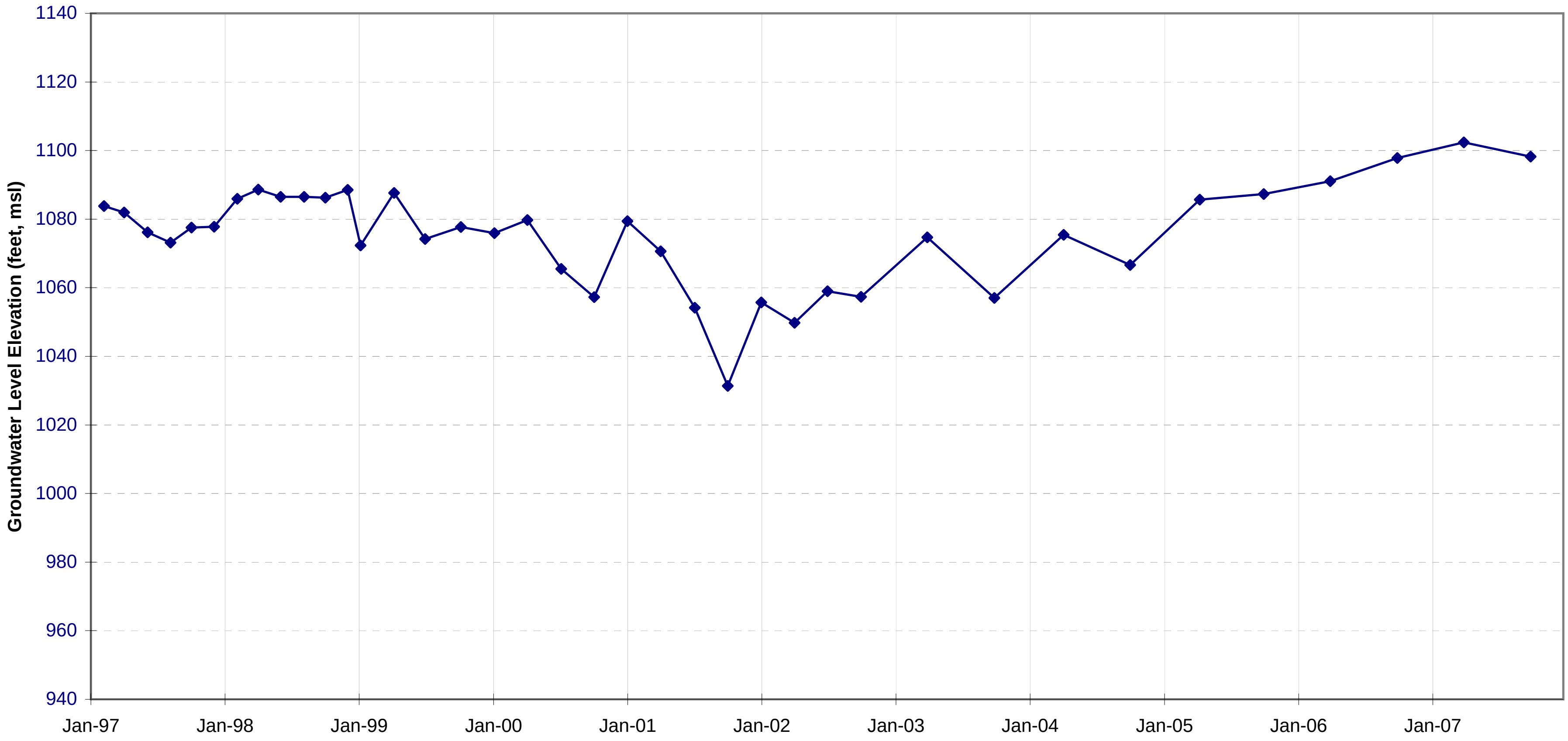
Water Levels, M-15MA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1140
1120
1100
1080
1060
1040
1020
1000
980
960
940
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

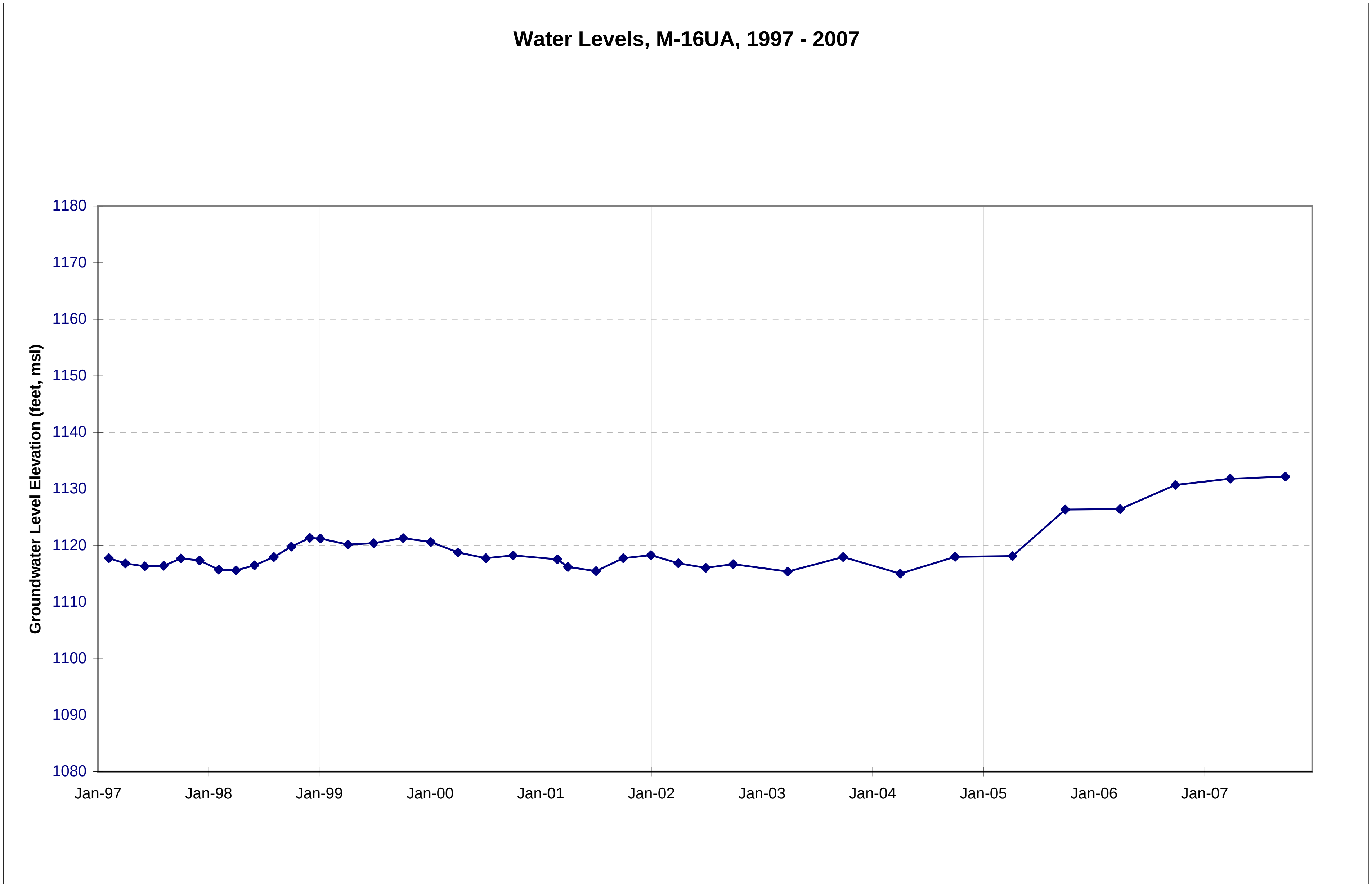


Water Levels, M-15UA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1180
1170
1160
1150
1140
1130
1120
1110
1100
1090
1080
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07


Water Levels, M-16LA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1080
1060
1040
1020
1000
980
960
940
920
900
880
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

Water Levels, M-16MA, 1997 - 2007




Water Levels, M-16UA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1180
1170
1160
1150
1140
1130
1120
1110
1100
1090
1080
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
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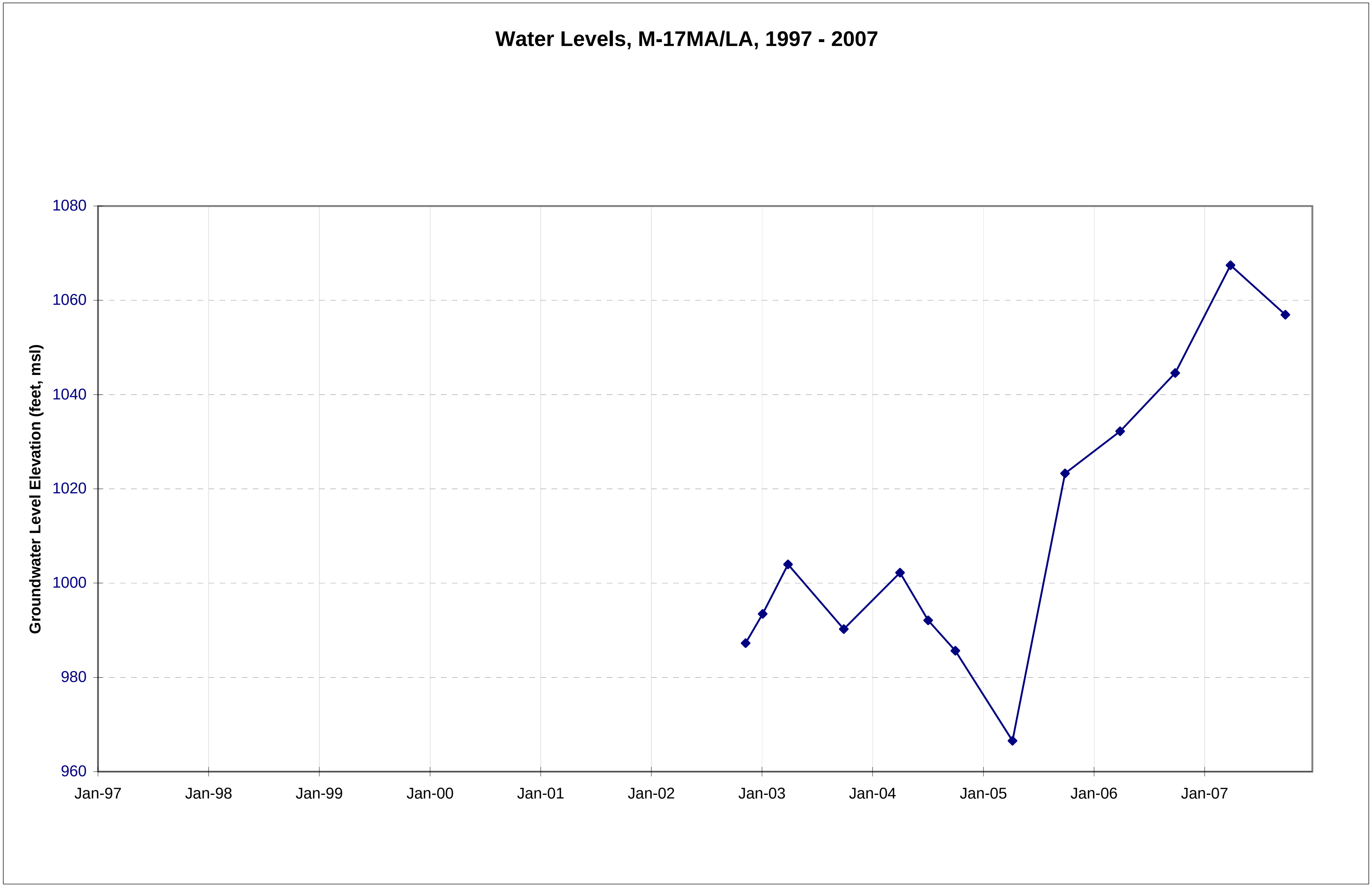
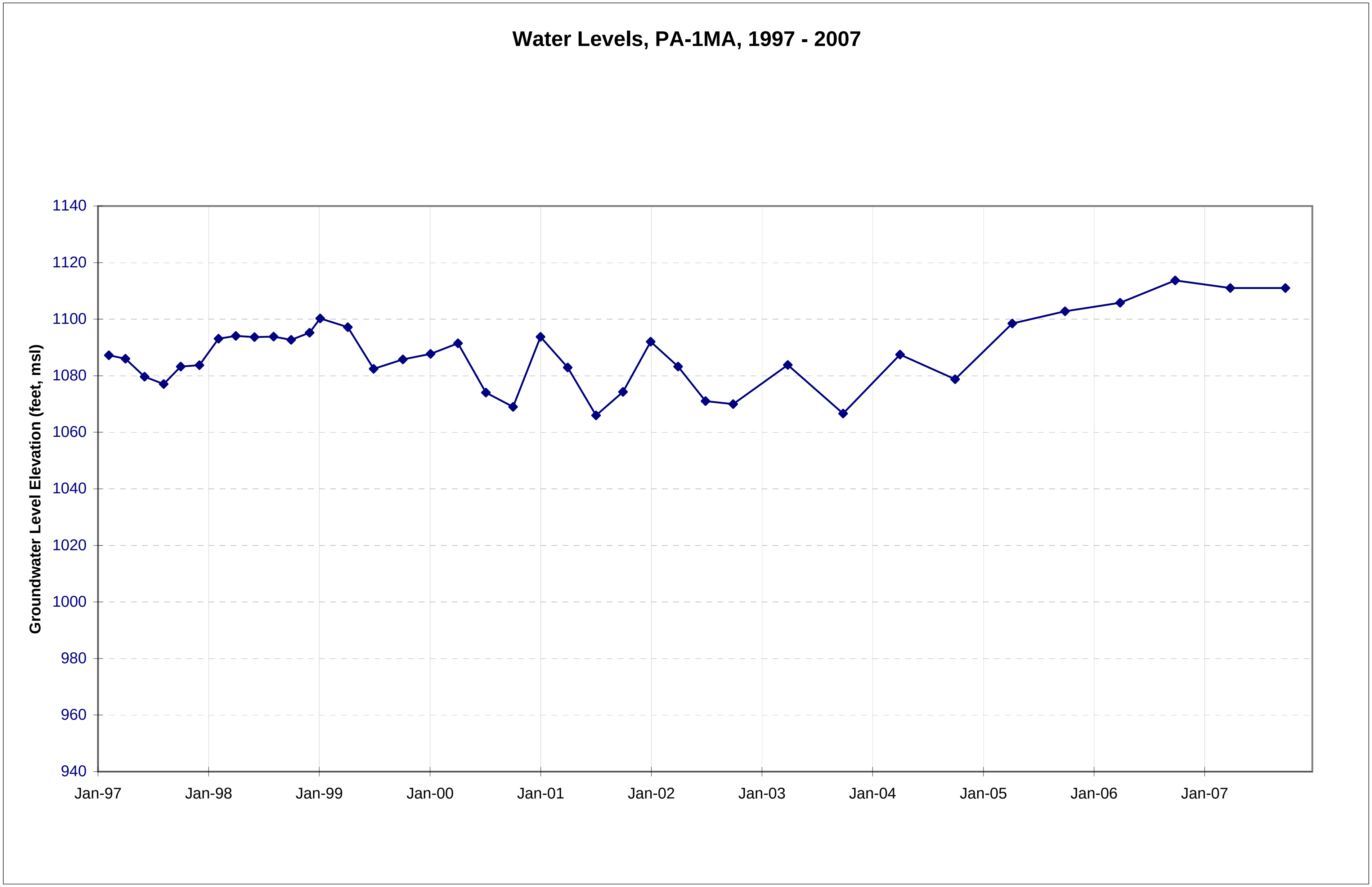
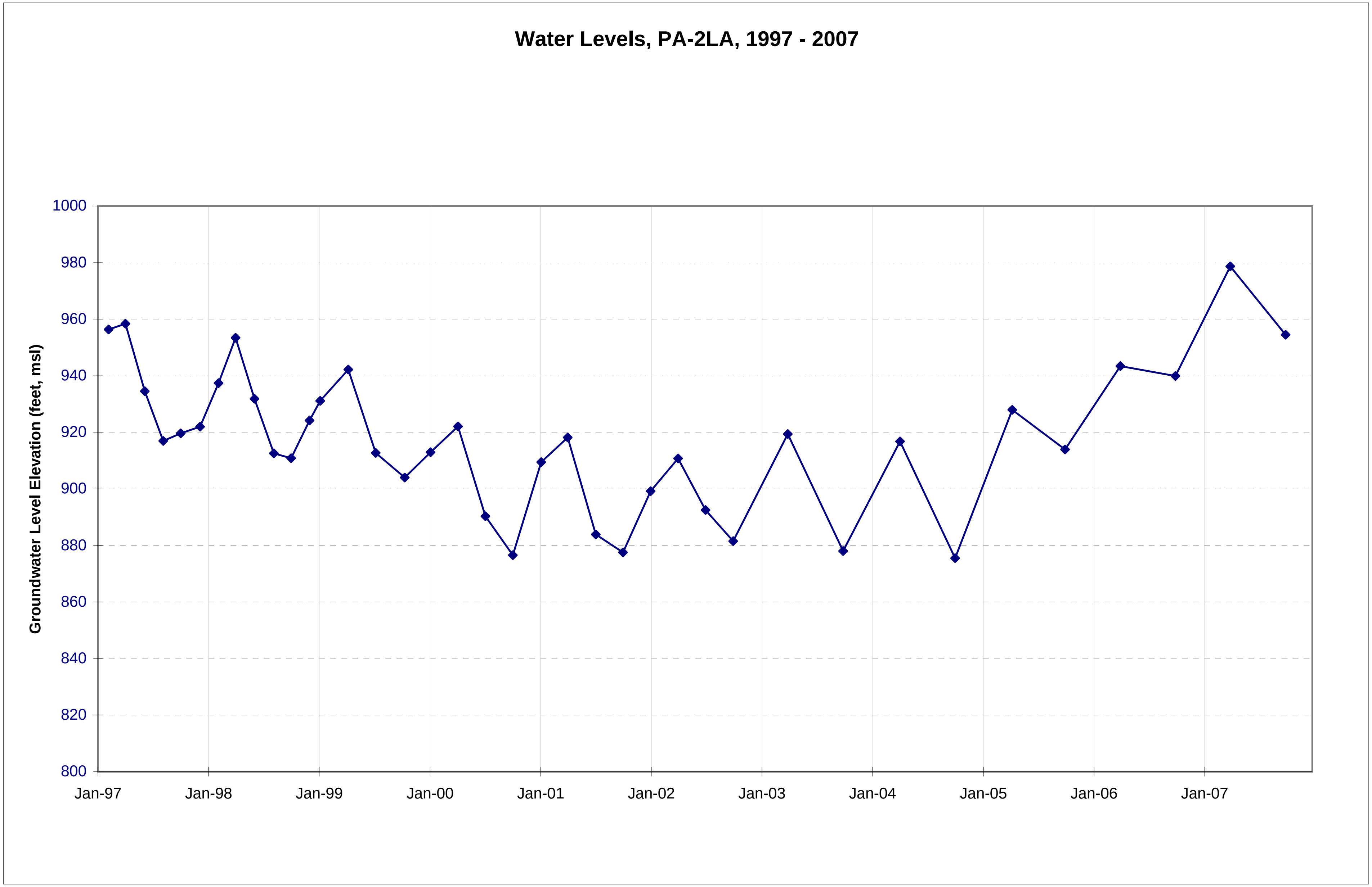
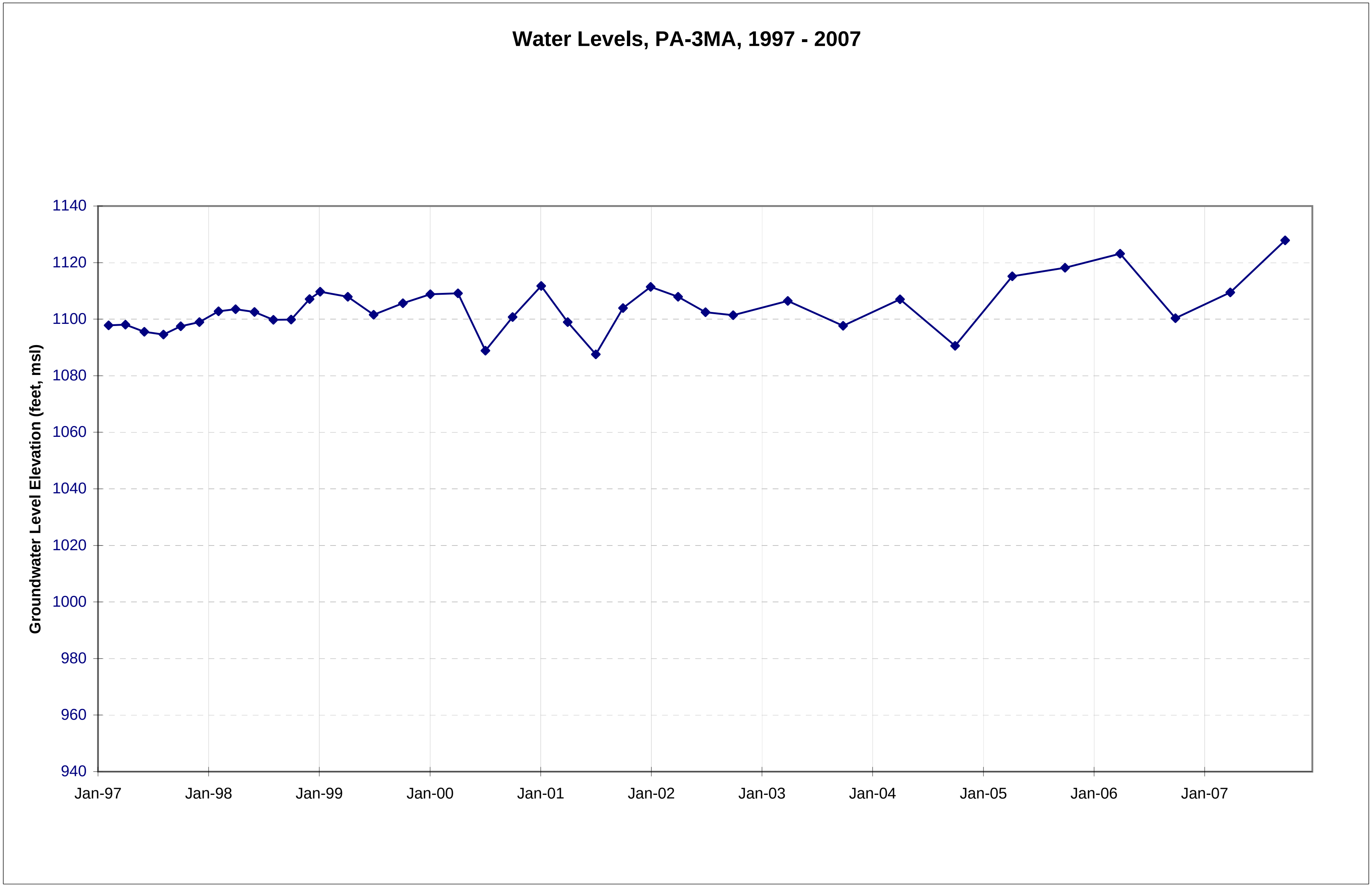
Jan-07


Water Levels, M-17MA/LA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1080
1060
1040
1020
1000
980
960
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07


Water Levels, PA-1MA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1140
1120
1100
1080
1060
1040
1020
1000
980
960
940
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07



Water Levels, PA-2LA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1000
980
960
940
920
900
880
860
840
820
800
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07



Water Levels, PA-3MA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1140
1120
1100
1080
1060
1040
1020
1000
980
960
940
Jan-97
Jan-98
Jan-99
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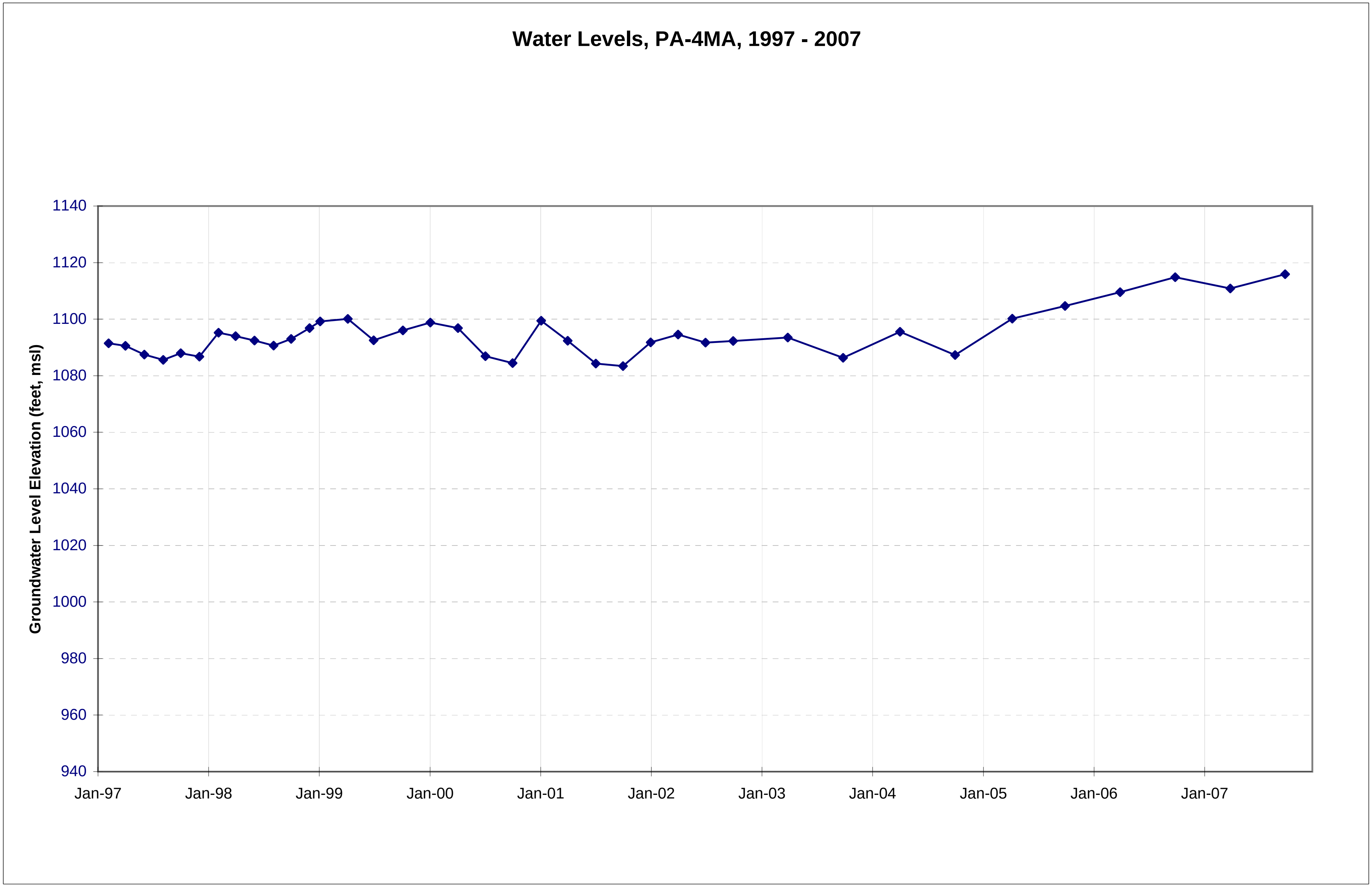
Jan-05
Jan-06
Jan-07



Water Levels, PA-4MA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1140
1120
1100
1080
1060
1040
1020
1000
980
960
940
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Jan-99
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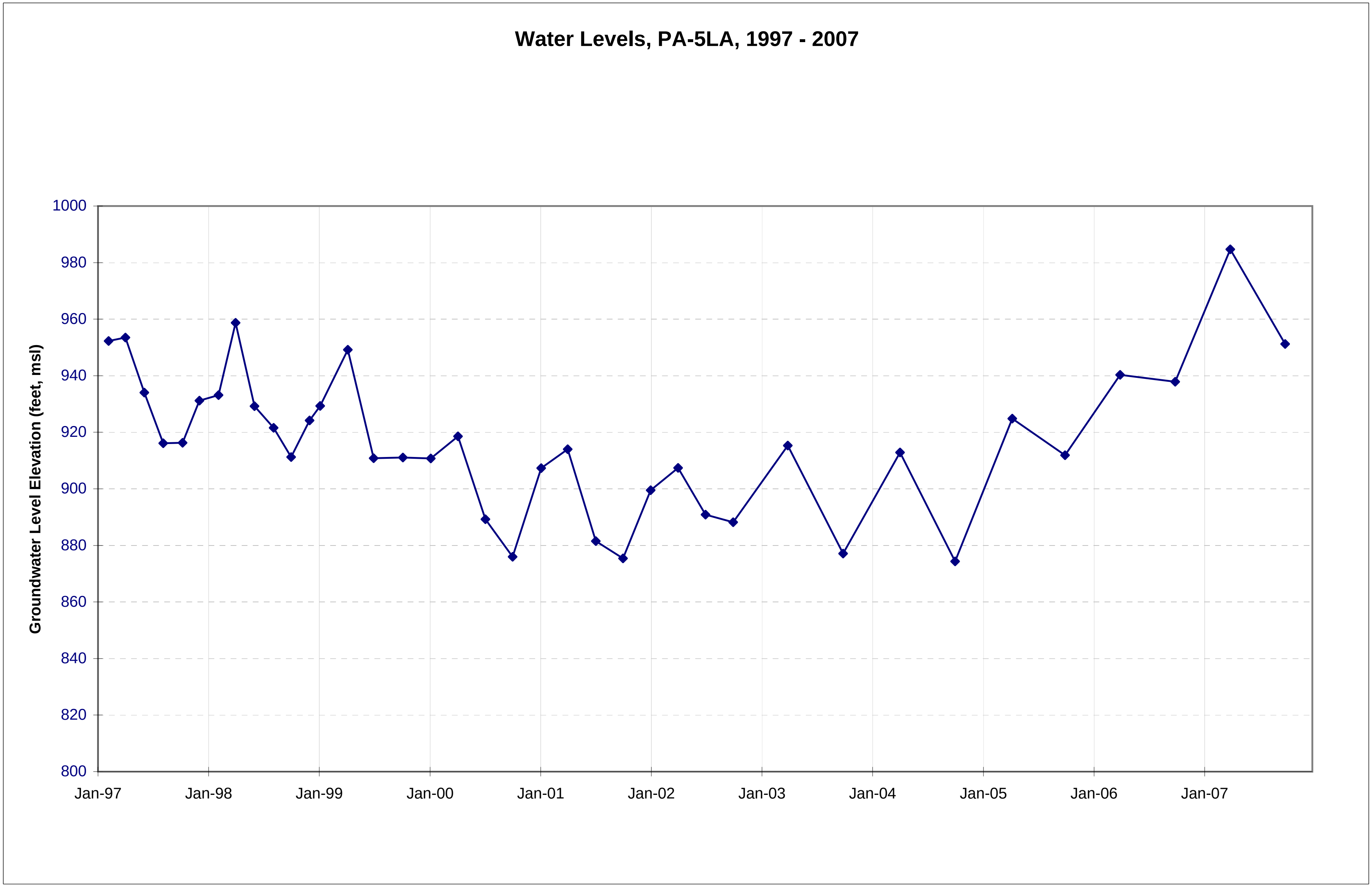
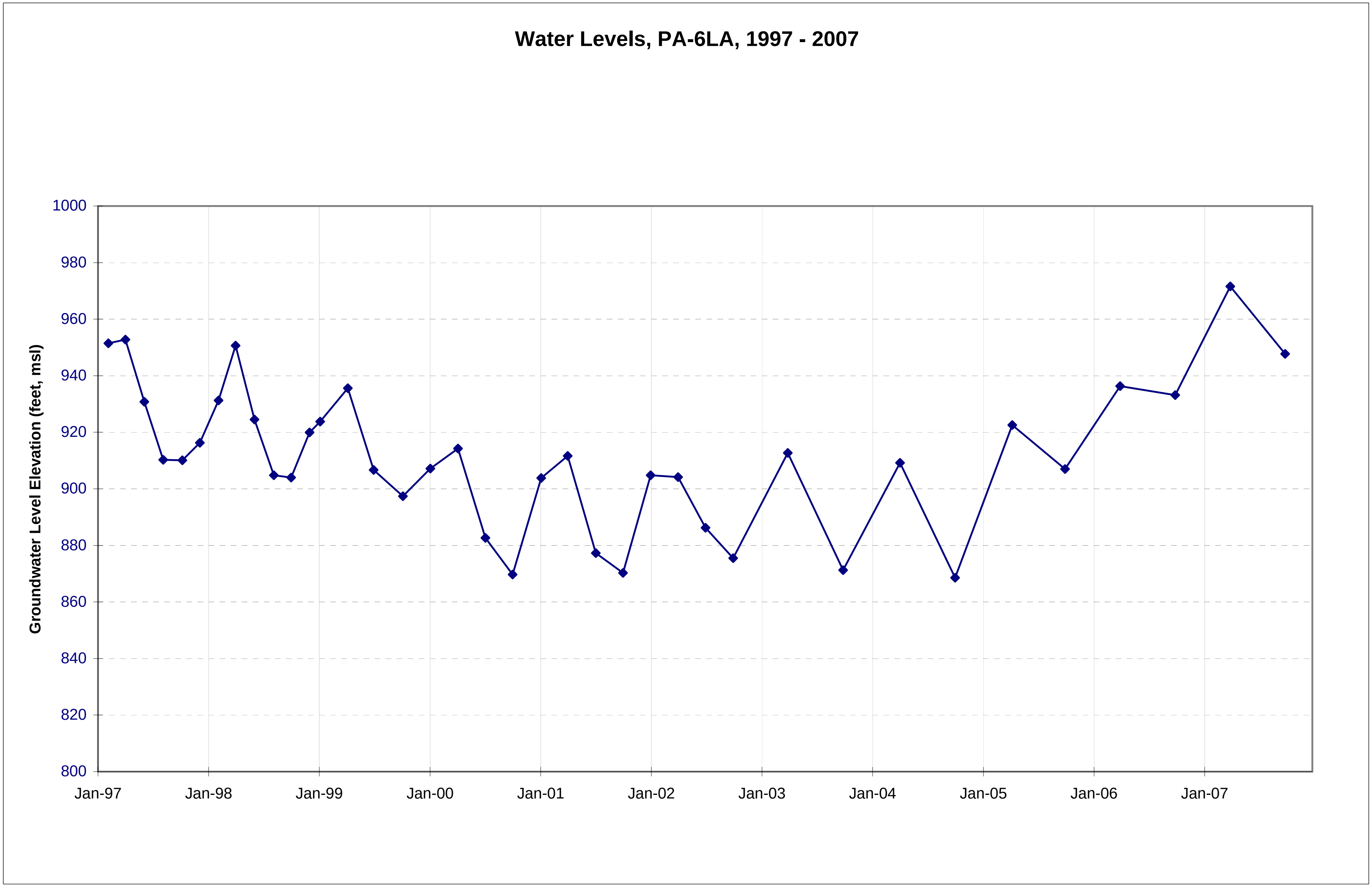
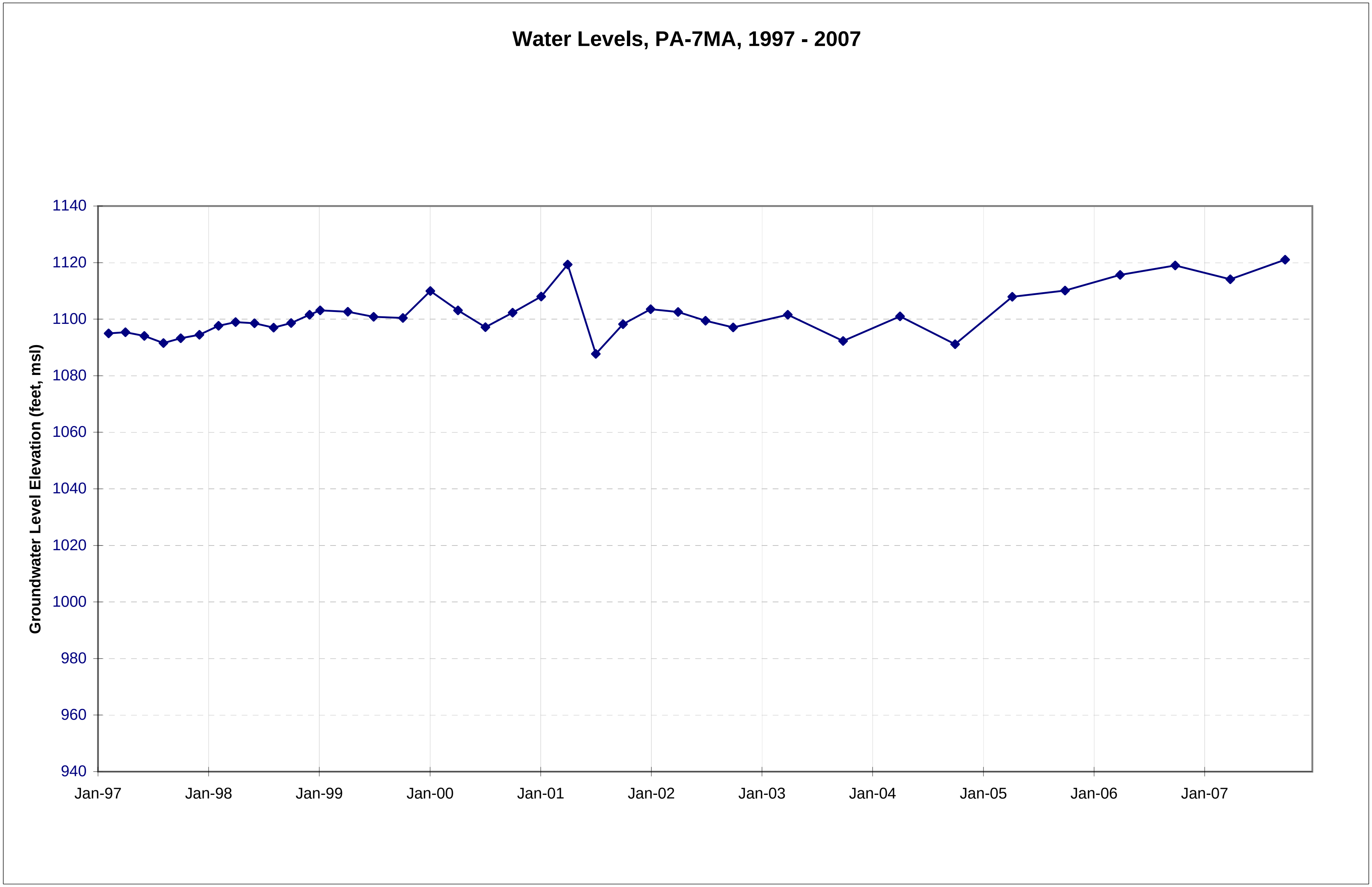
Jan-05
Jan-06
Jan-07



Water Levels, PA-5LA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1000
980
960
940
920
900
880
860
840
820
800
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07


Water Levels, PA-6LA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1000
980
960
940
920
900
880
860
840
820
800
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07


Water Levels, PA-7MA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1140
1120
1100
1080
1060
1040
1020
1000
980
960
940
Jan-97
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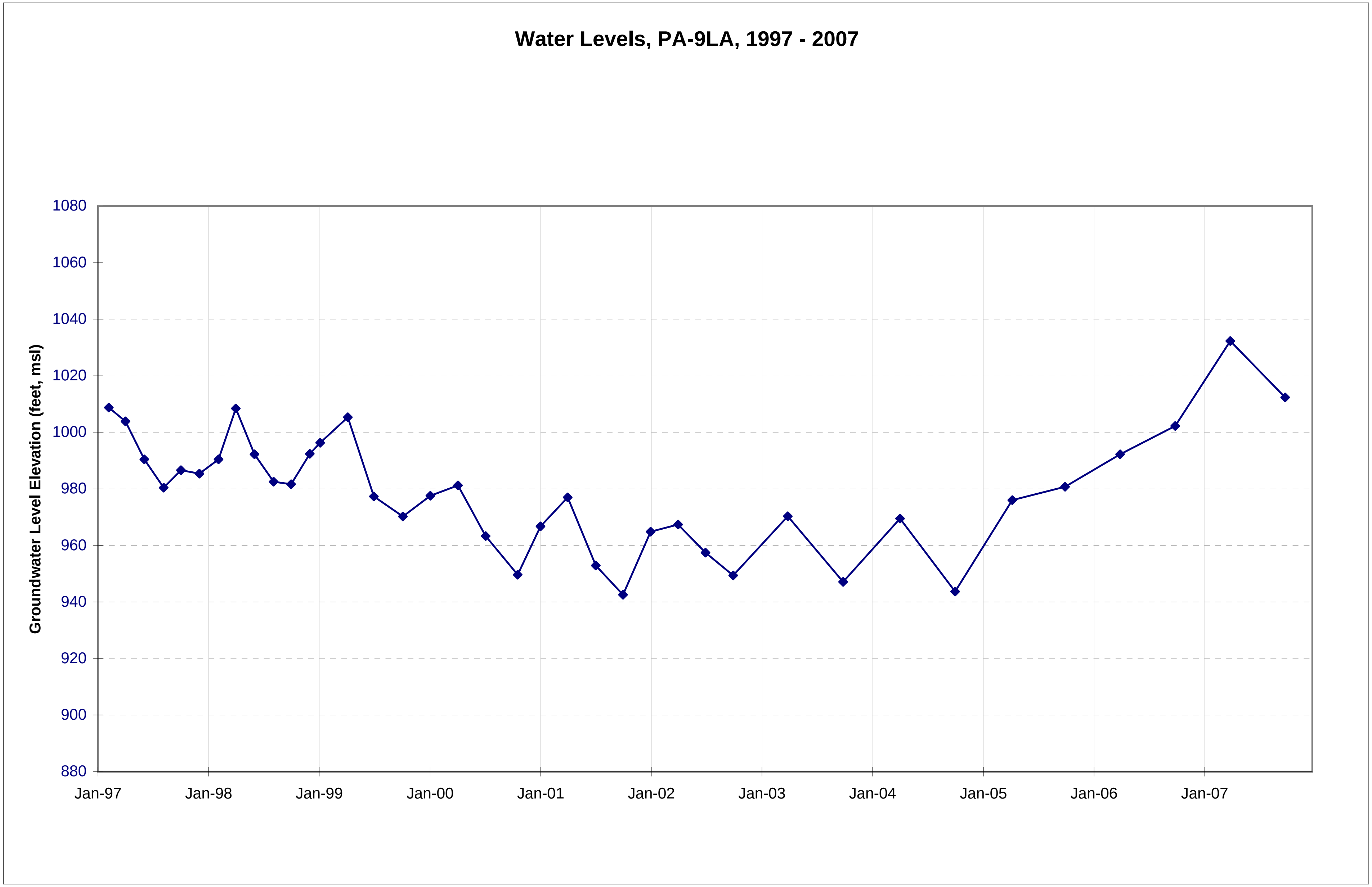
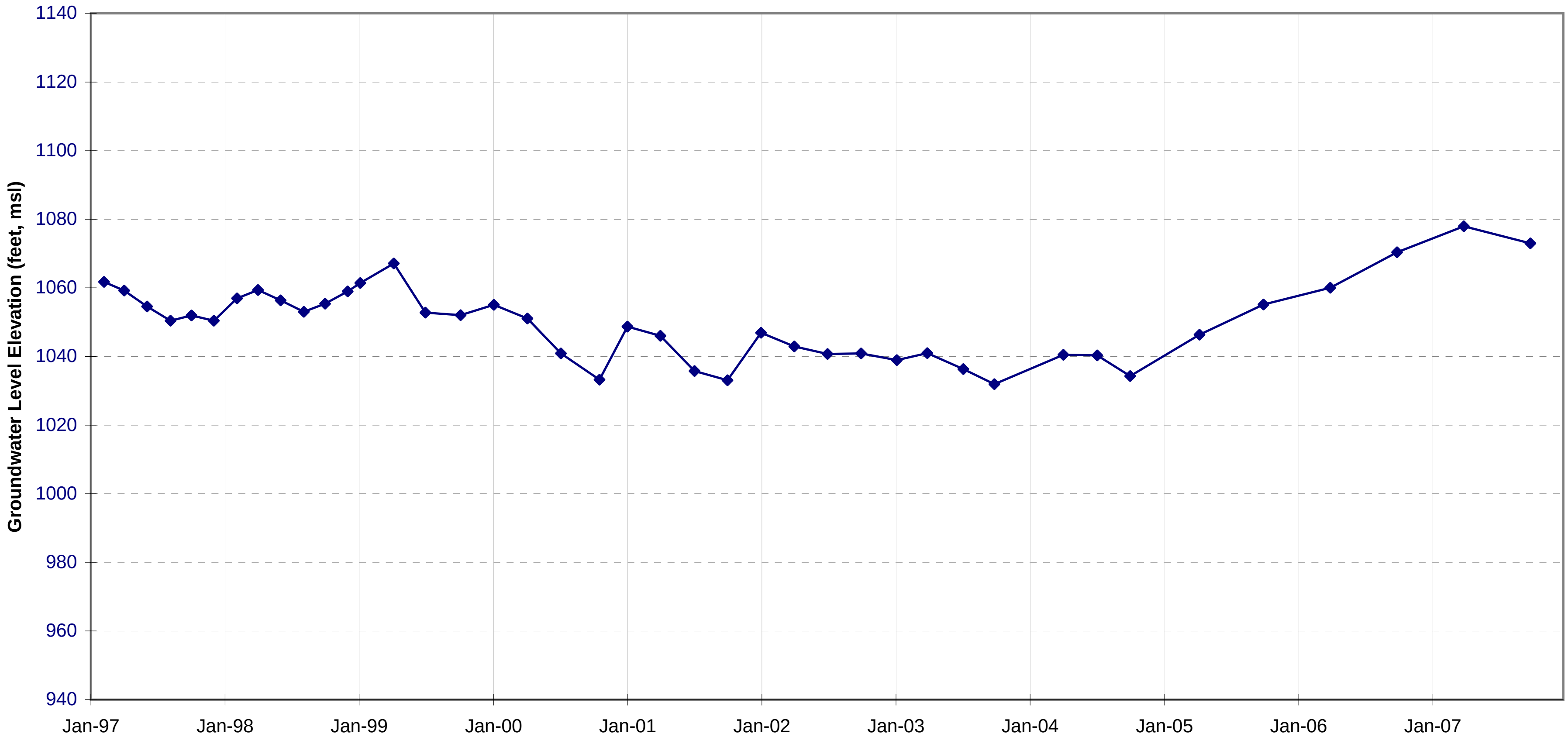
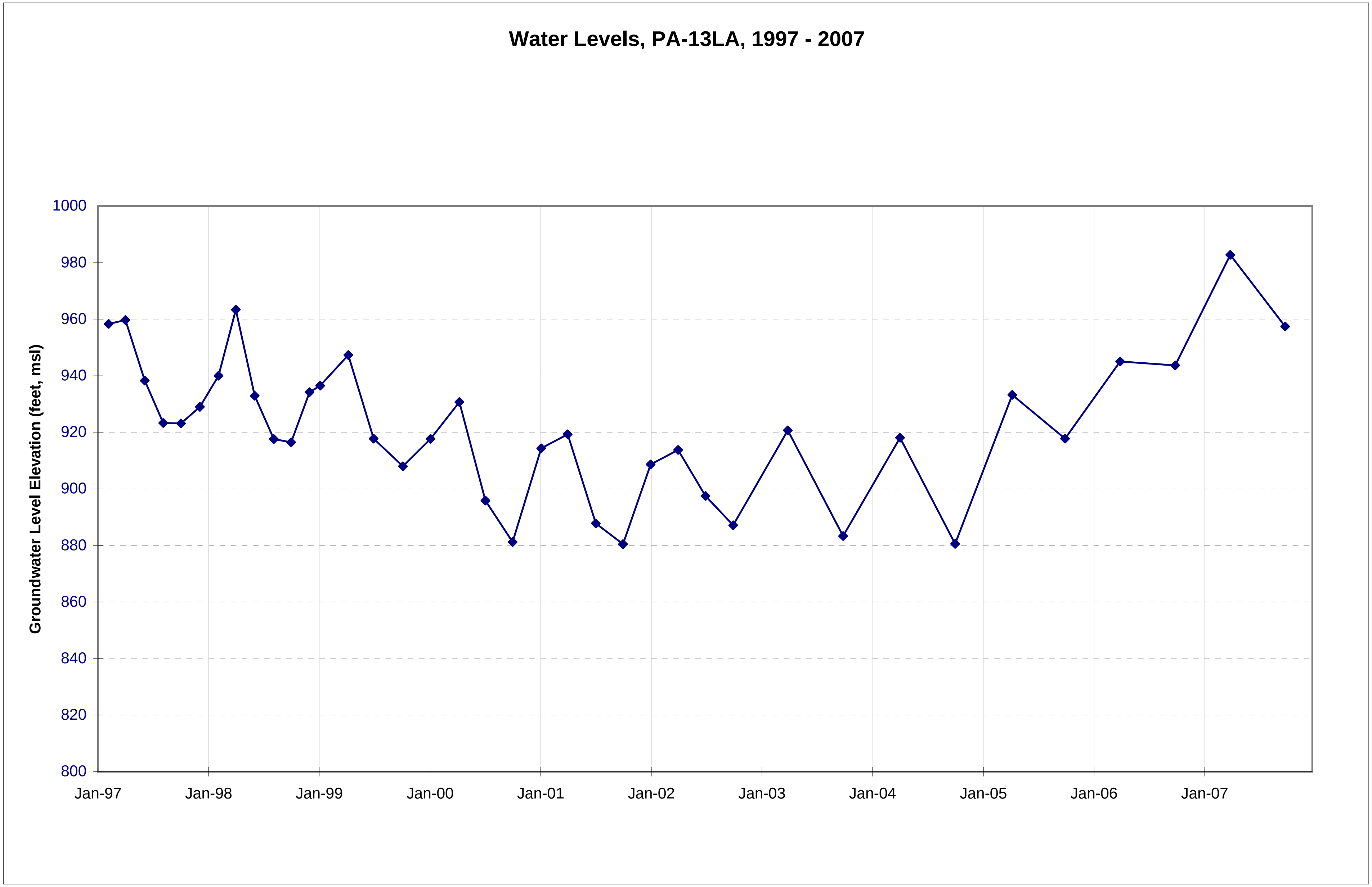
Jan-05
Jan-06
Jan-07



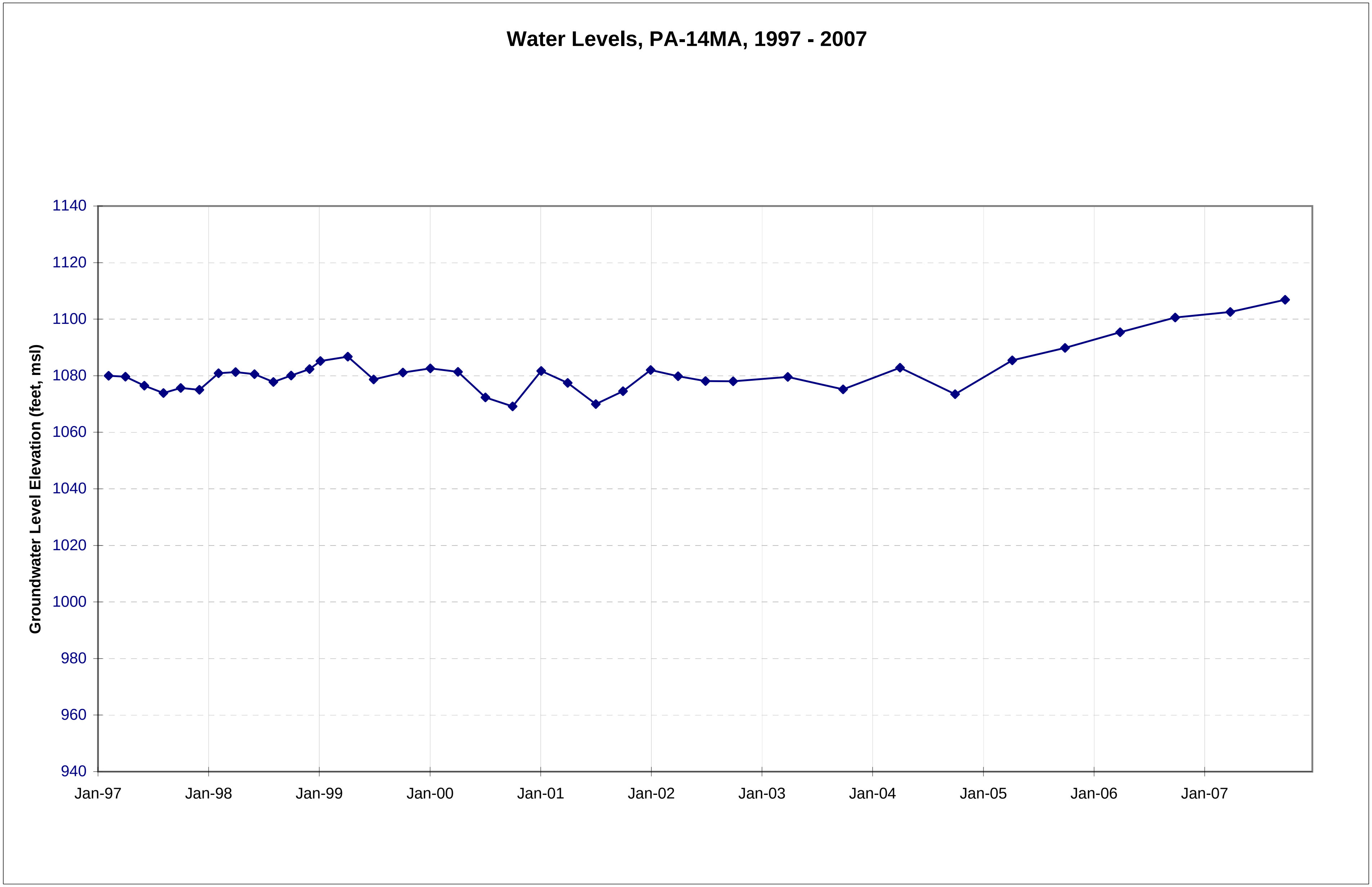
Water Levels, PA-9LA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1080
1060
1040
1020
1000
980
960
940
920
900
880
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

Water Levels, PA-10MA, 1997 - 2007





Water Levels, PA-13LA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1000
980
960
940
920
900
880
860
840
820
800
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07


Water Levels, PA-14MA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1140
1120
1100
1080
1060
1040
1020
1000
980
960
940
Jan-97
Jan-98
Jan-99
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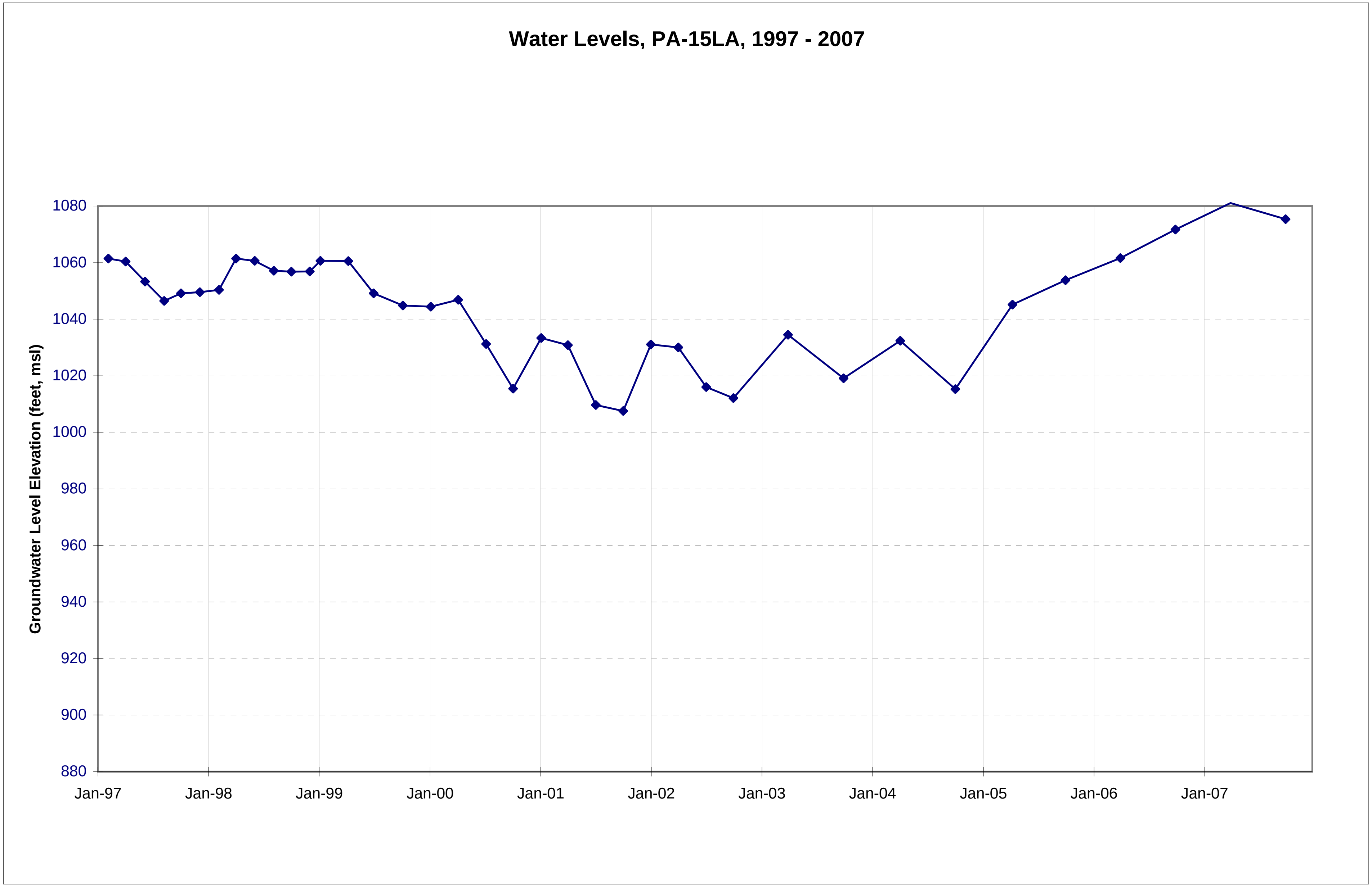
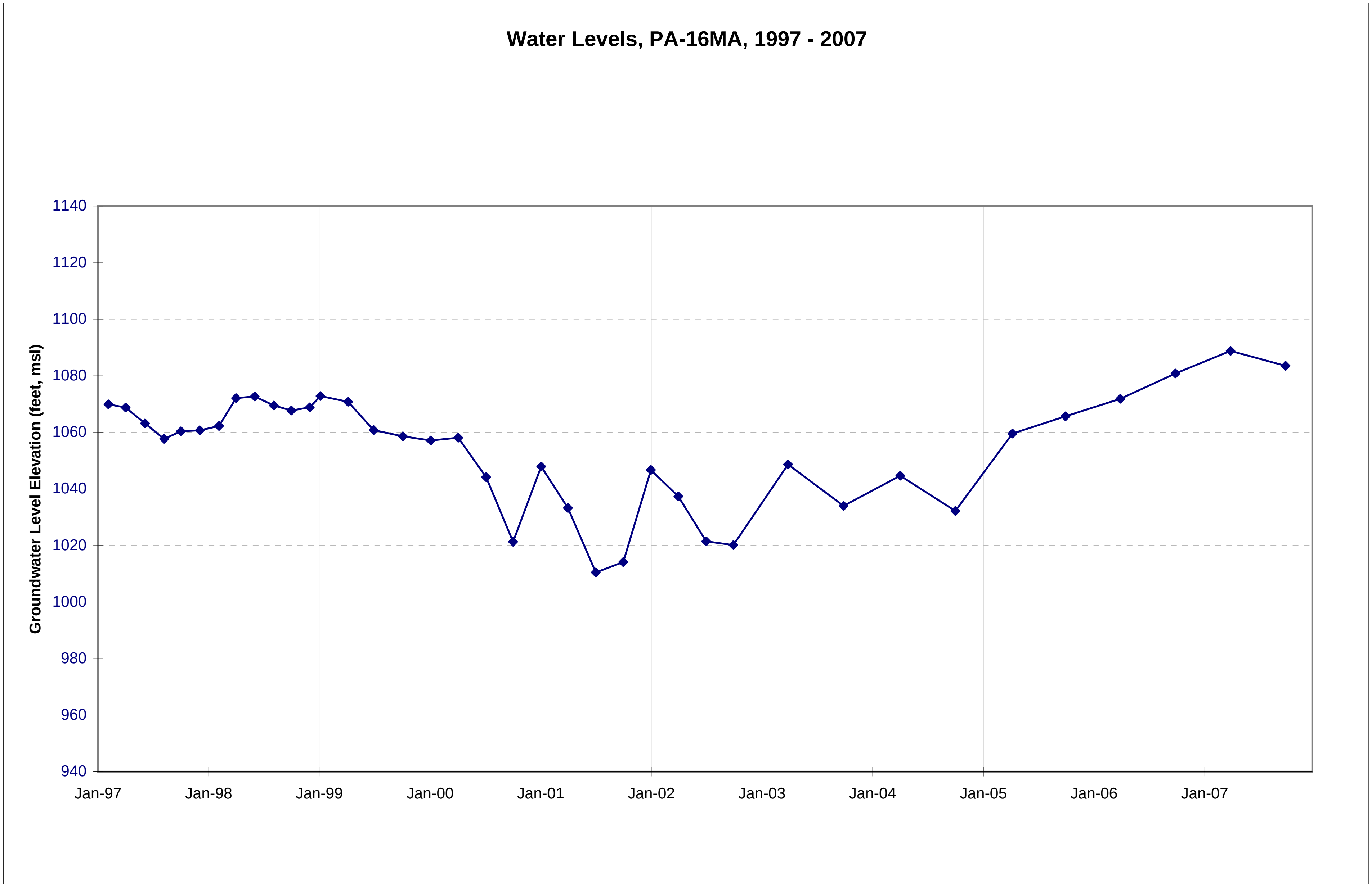
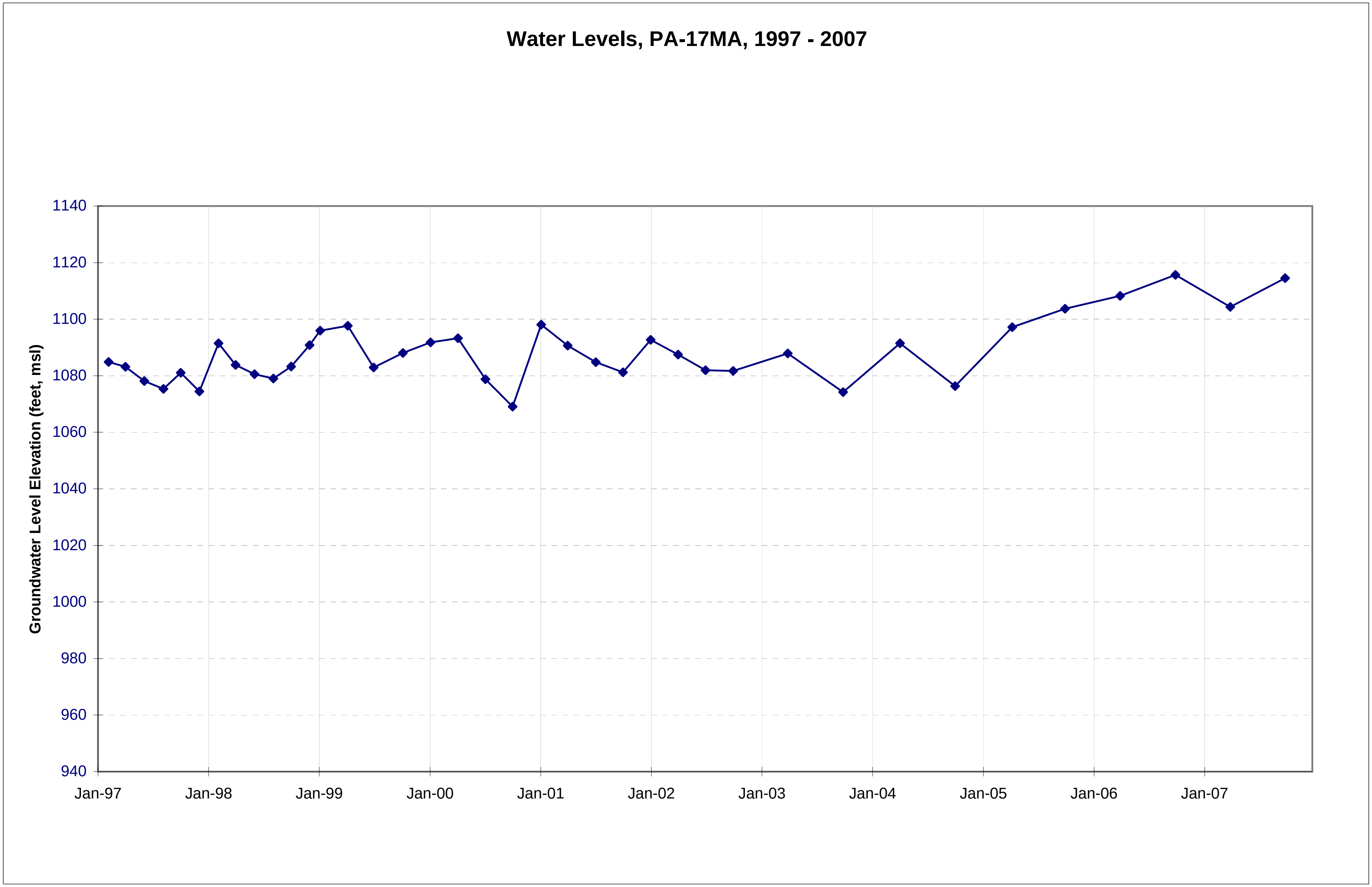
Jan-05
Jan-06
Jan-07

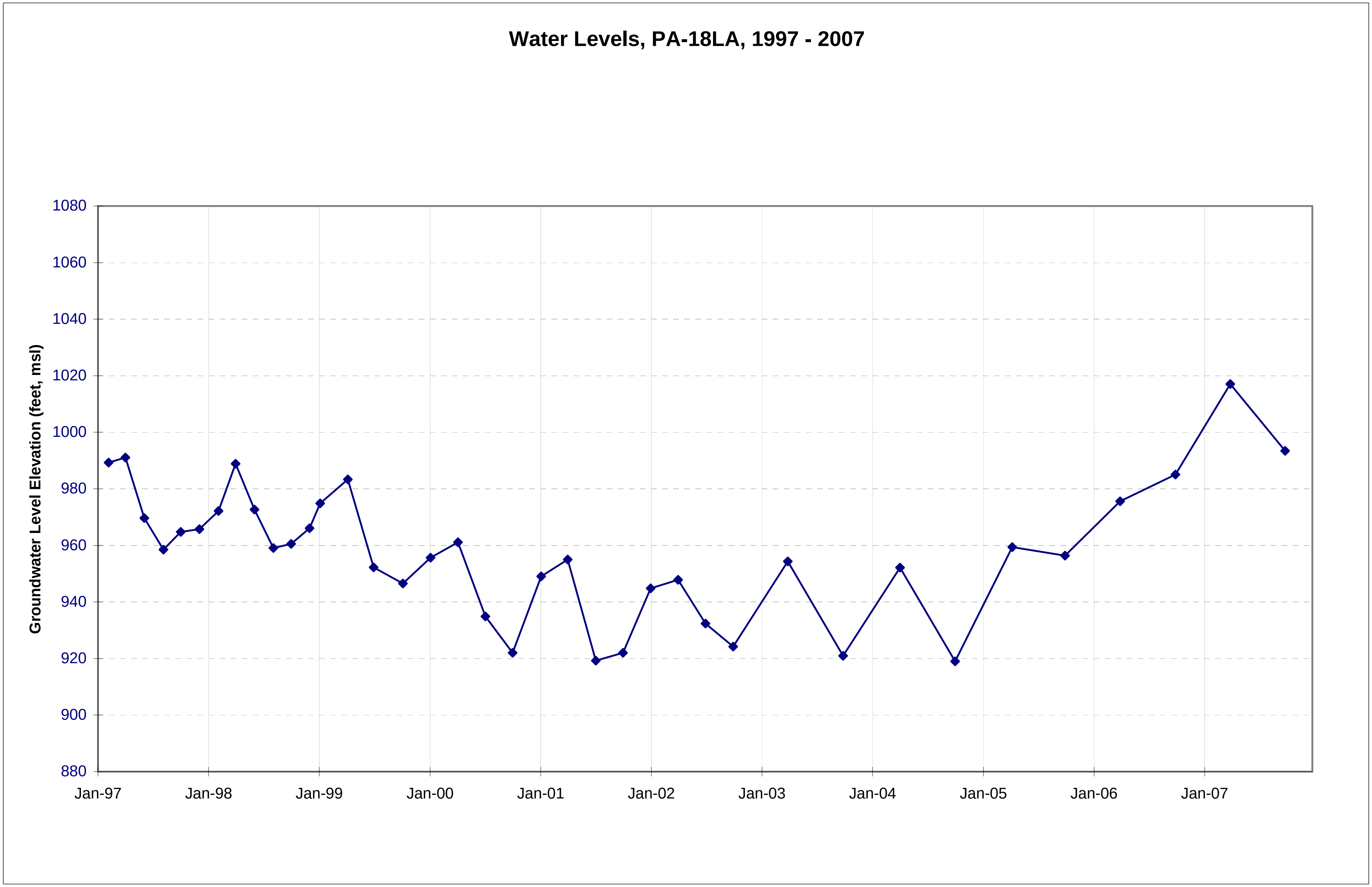


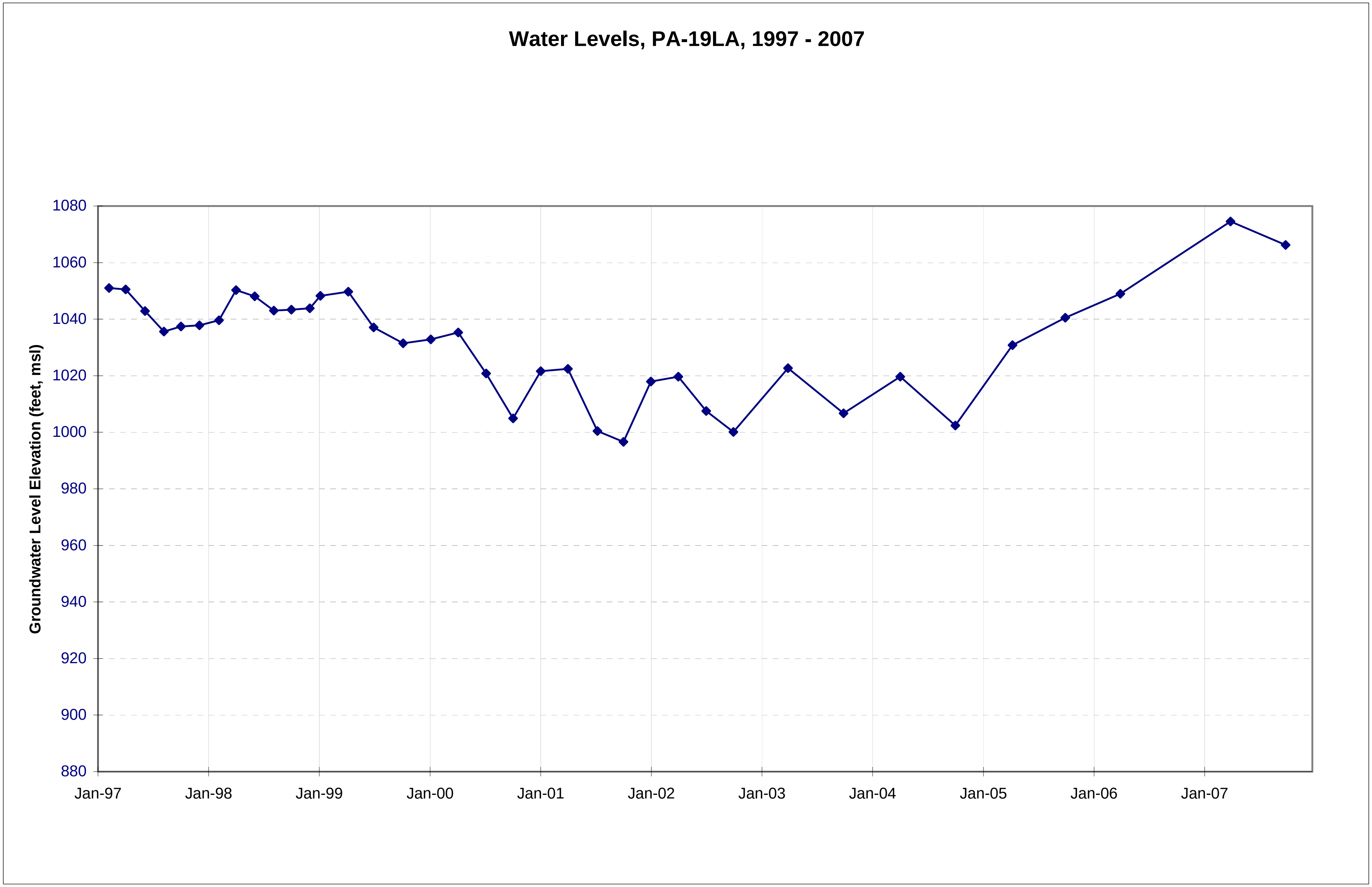
Water Levels, PA-15LA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1080
1060
1040
1020
1000
980
960
940
920
900
880
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

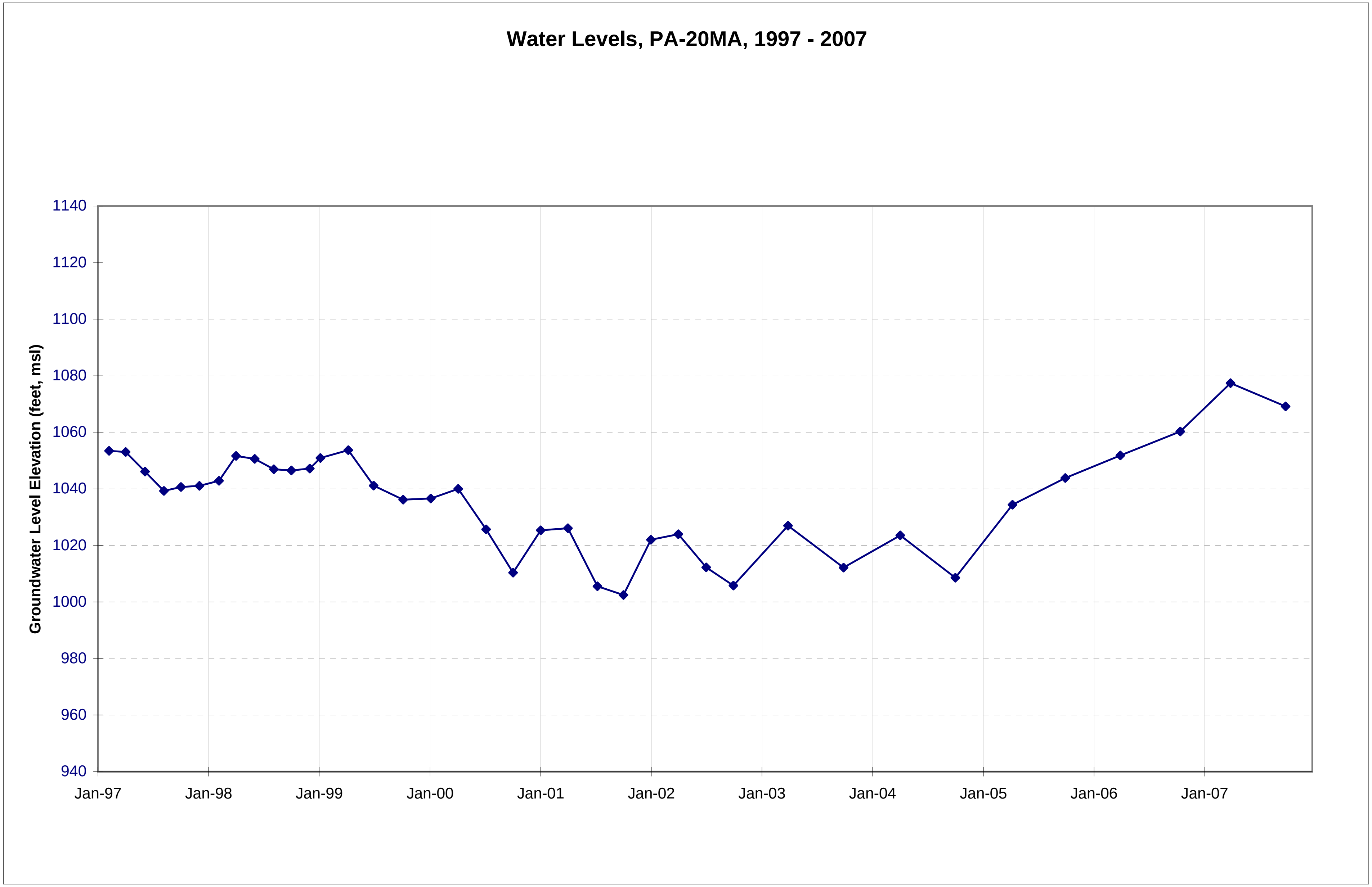


Water Levels, PA-16MA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1140
1120
1100
1080
1060
1040
1020
1000
980
960
940
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07


Water Levels, PA-17MA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1140
1120
1100
1080
1060
1040
1020
1000
980
960
940
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07


Water Levels, PA-18LA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1080
1060
1040
1020
1000
980
960
940
920
900
880
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07


Water Levels, PA-19LA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1080
1060
1040
1020
1000
980
960
940
920
900
880
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07



Water Levels, PA-20MA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
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1120
1100
1080
1060
1040
1020
1000
980
960
940
Jan-97
Jan-98
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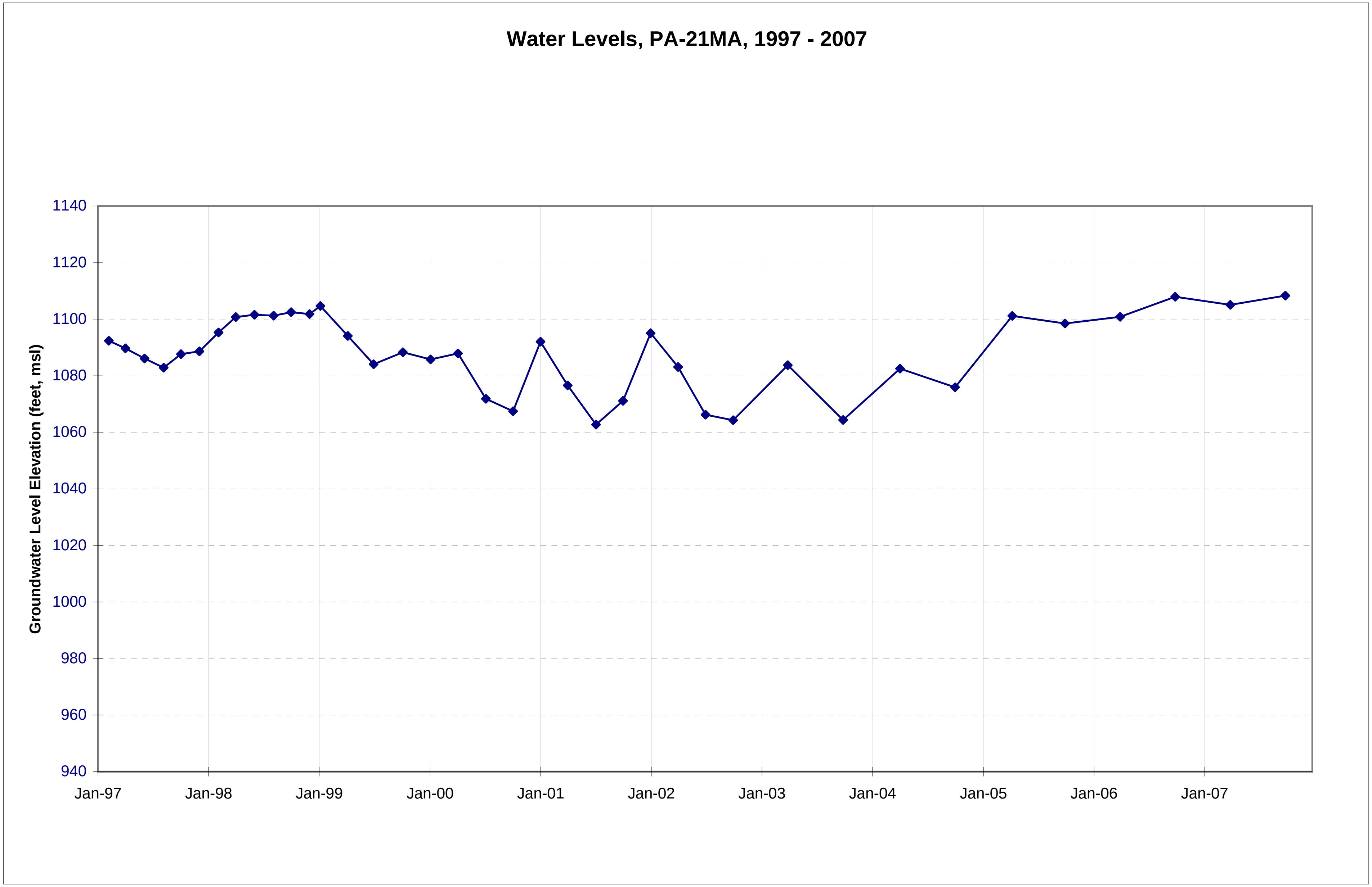
Jan-05
Jan-06
Jan-07



Water Levels, PA-21MA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1140
1120
1100
1080
1060
1040
1020
1000
980
960
940
Jan-97
Jan-98
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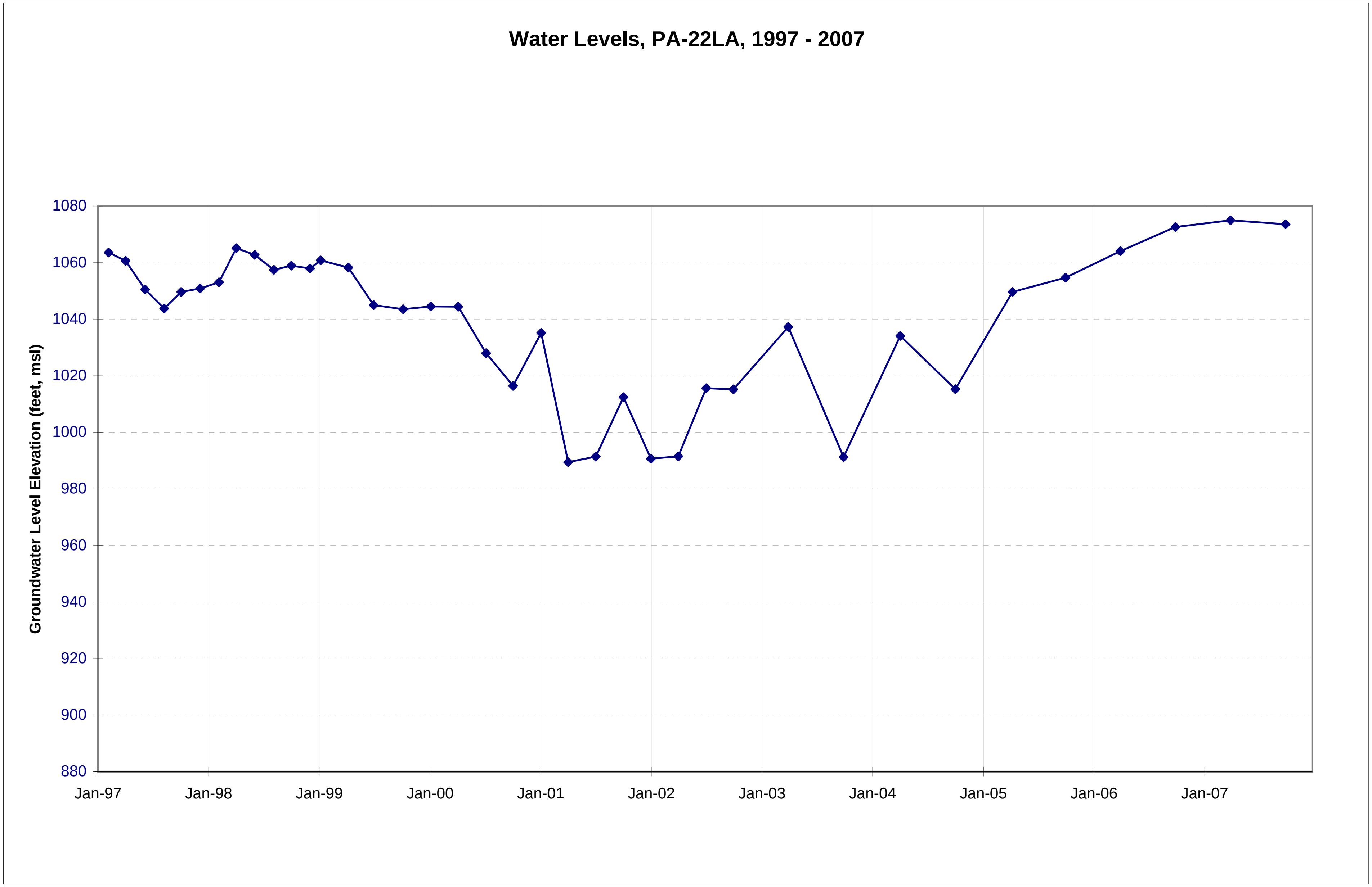
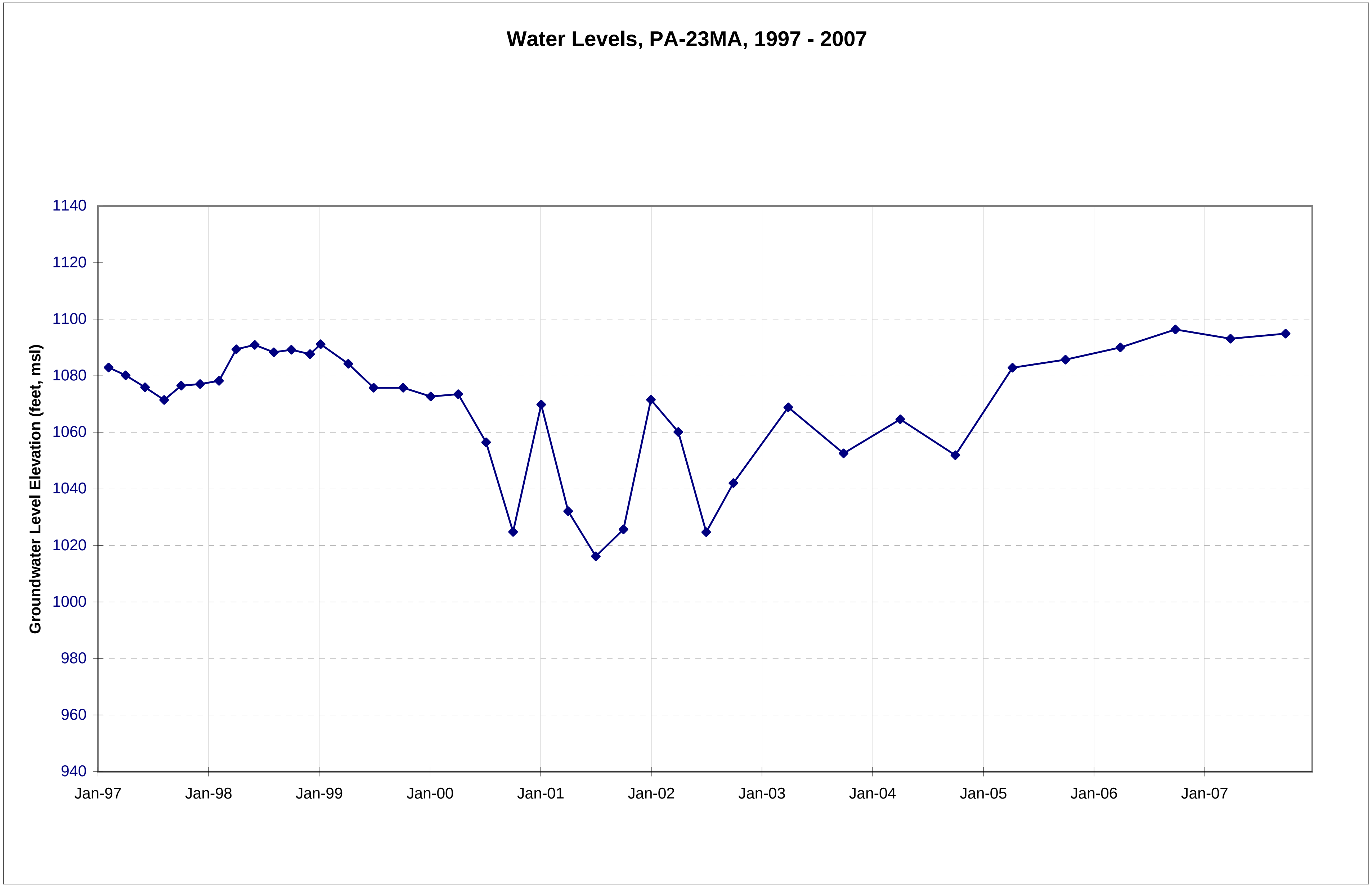
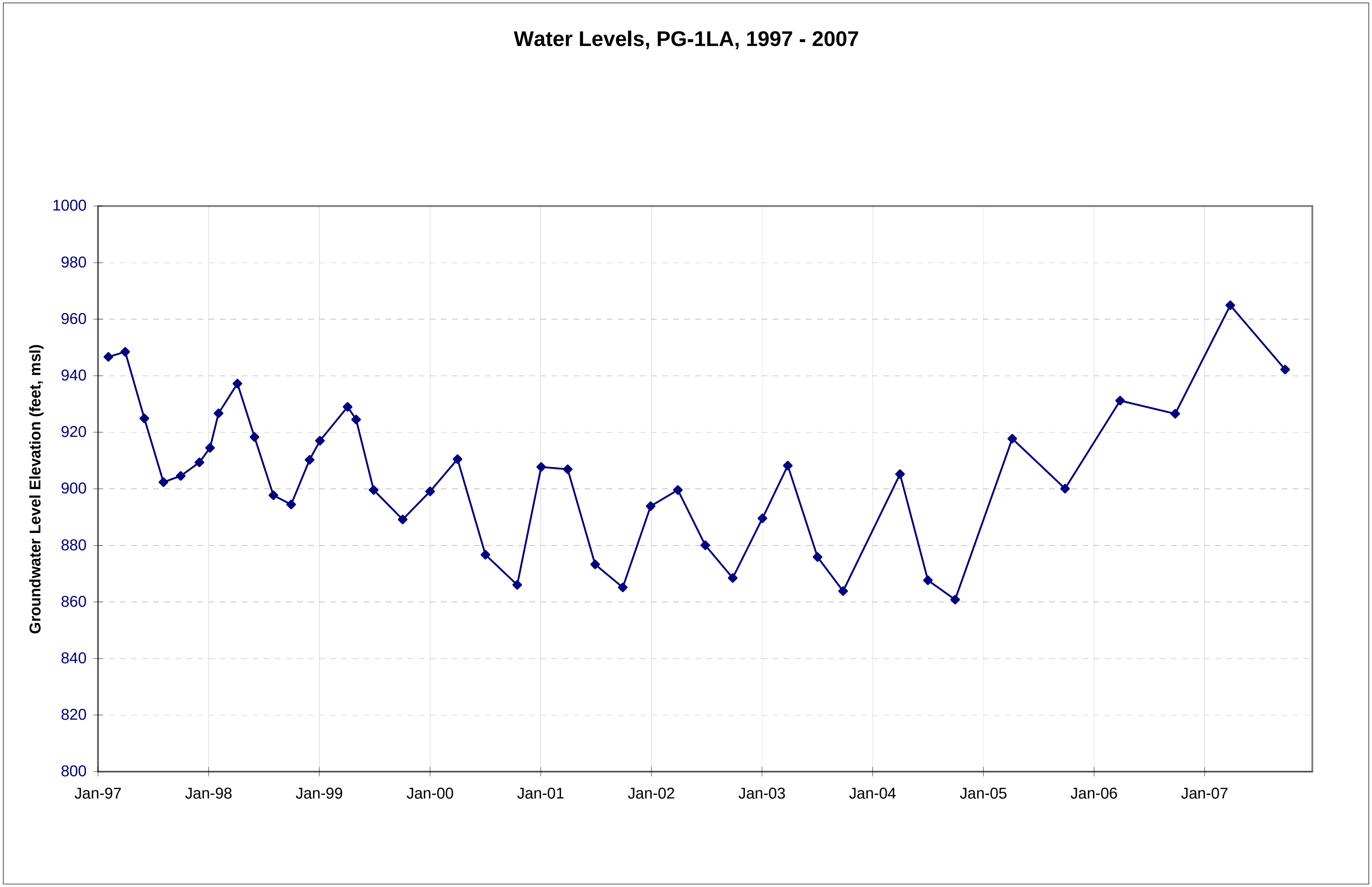
Jan-05
Jan-06
Jan-07

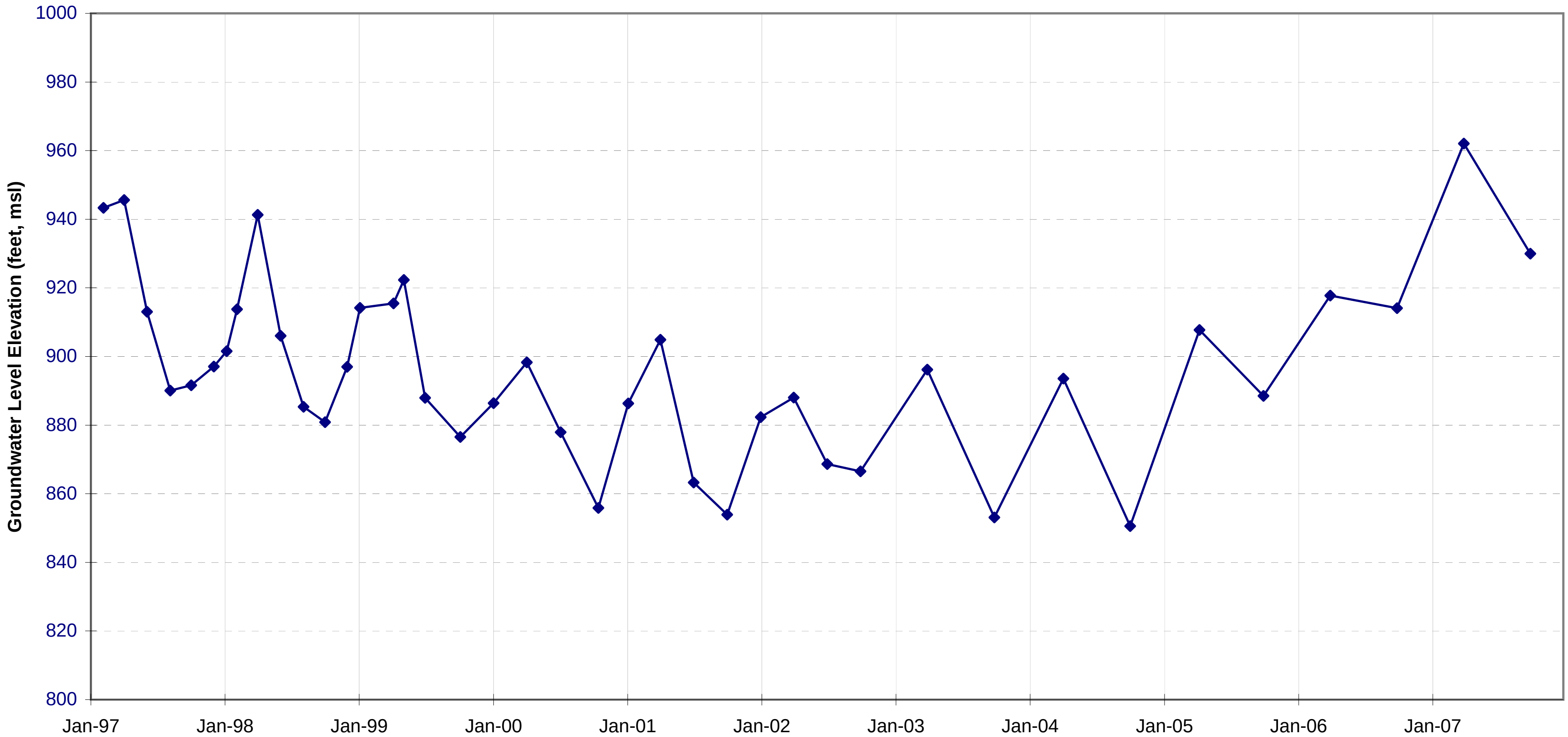

Water Levels, PA-22LA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1080
1060
1040
1020
1000
980
960
940
920
900
880
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

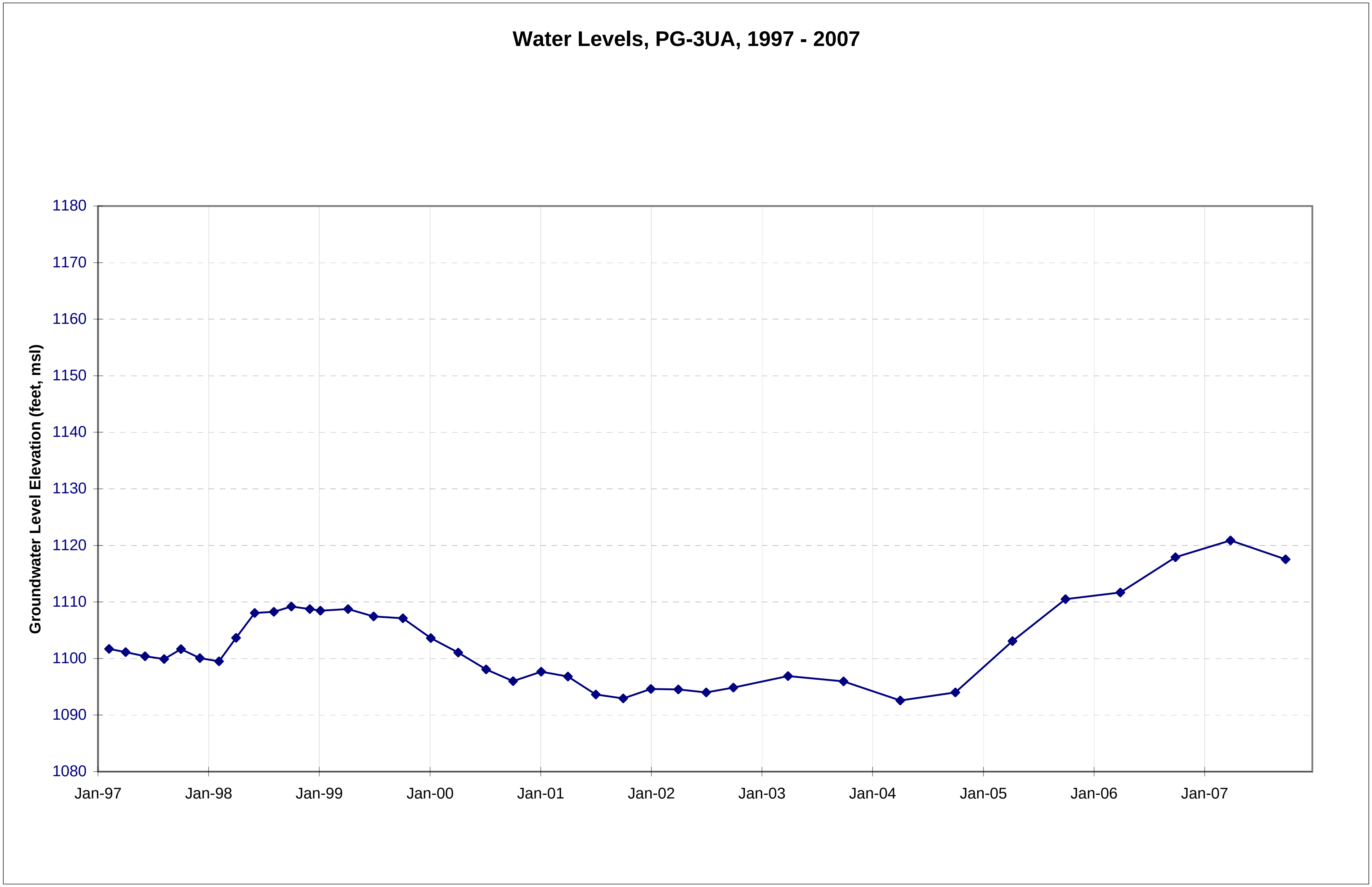

Water Levels, PA-23MA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1140
1120
1100
1080
1060
1040
1020
1000
980
960
940
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07



Water Levels, PG-1LA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1000
980
960
940
920
900
880
860
840
820
800
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

Water Levels, PG-2LA, 1997 - 2007




Water Levels, PG-3UA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1180
1170
1160
1150
1140
1130
1120
1110
1100
1090
1080
Jan-97
Jan-98
Jan-99
Jan-00
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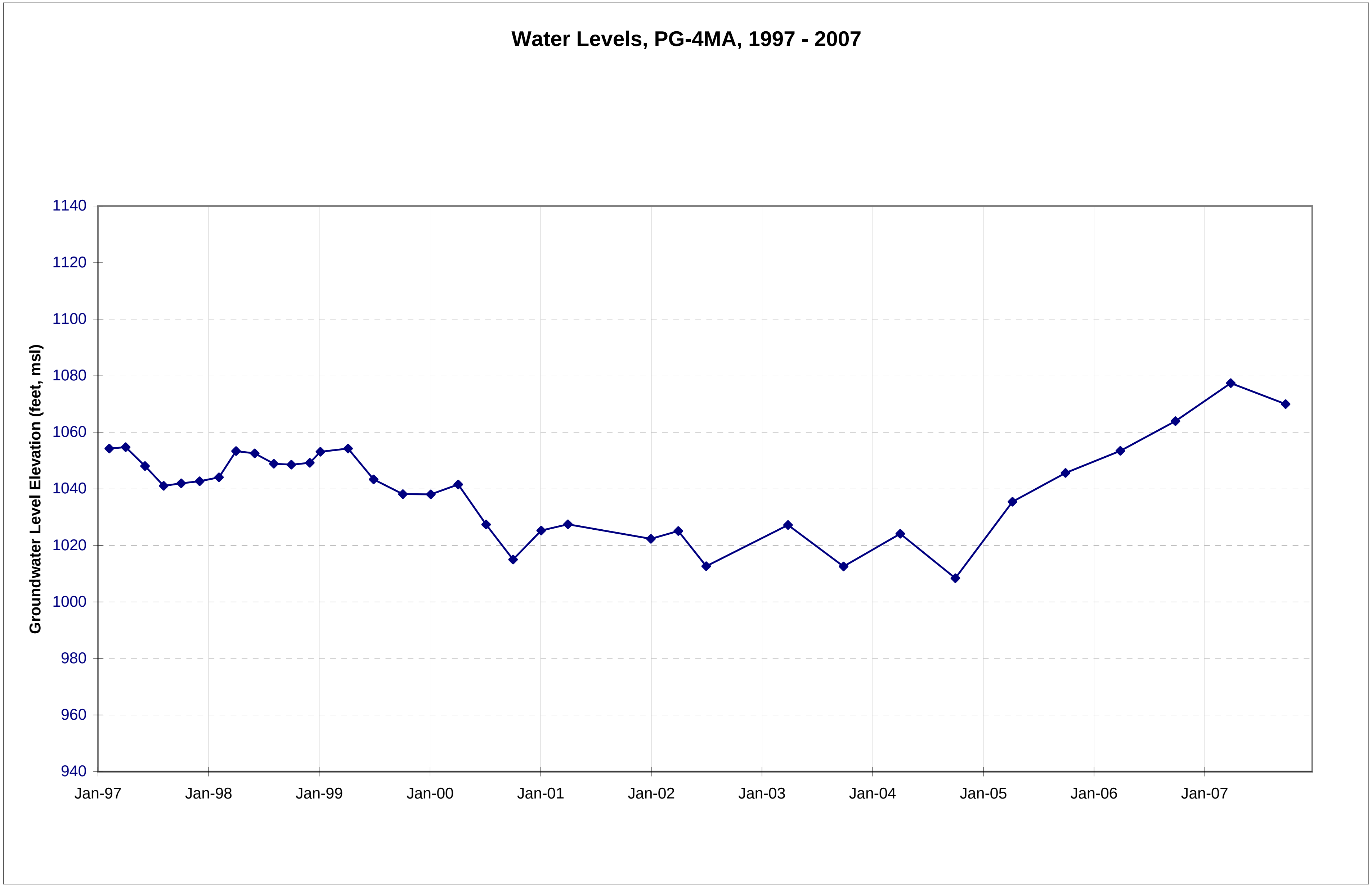
Jan-05
Jan-06
Jan-07


Water Levels, PG-4MA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1140
1120
1100
1080
1060
1040
1020
1000
980
960
940
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
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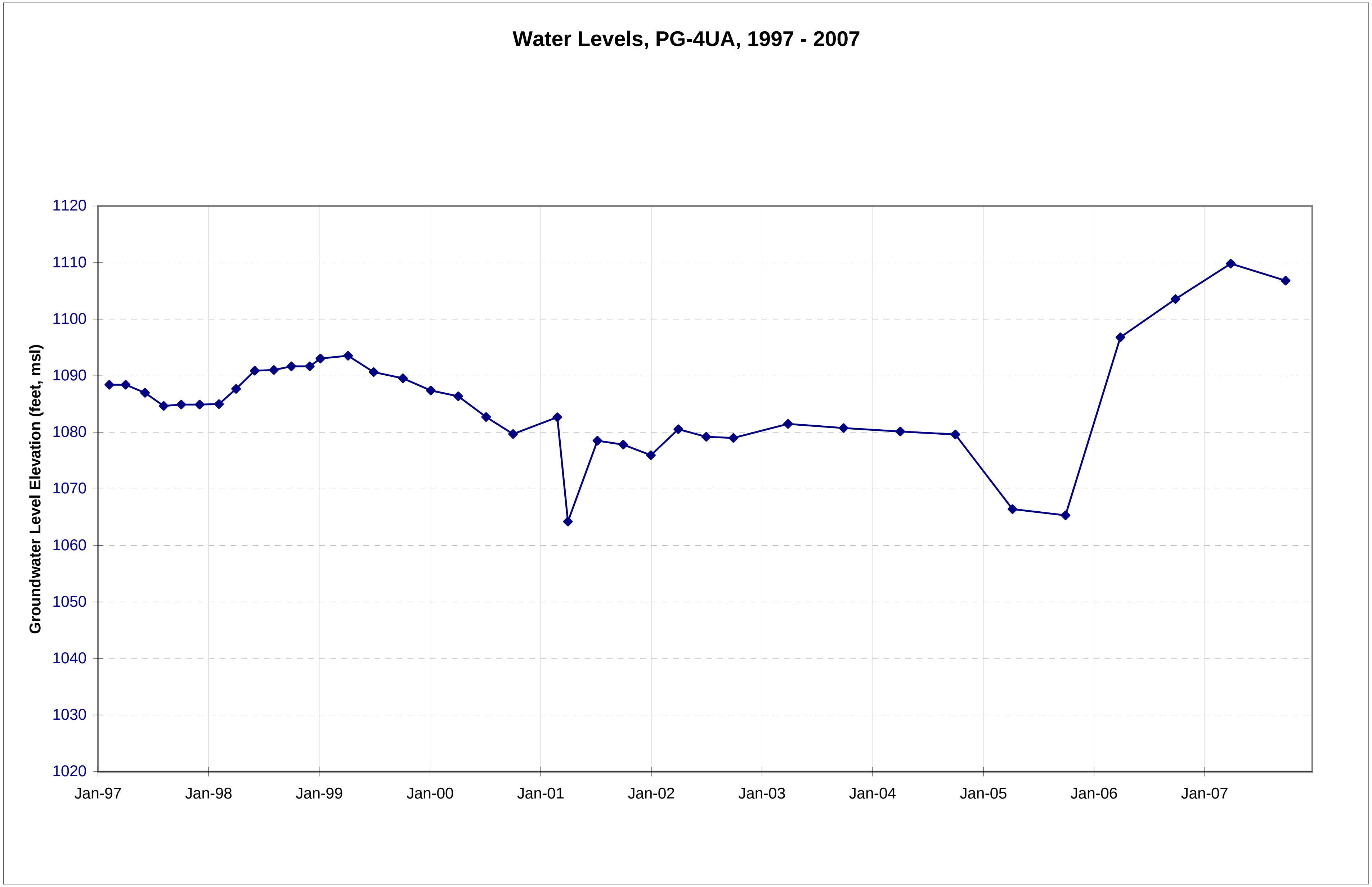
Jan-05
Jan-06
Jan-07



Water Levels, PG-4UA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1120
1110
1100
1090
1080
1070
1060
1050
1040
1030
1020
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
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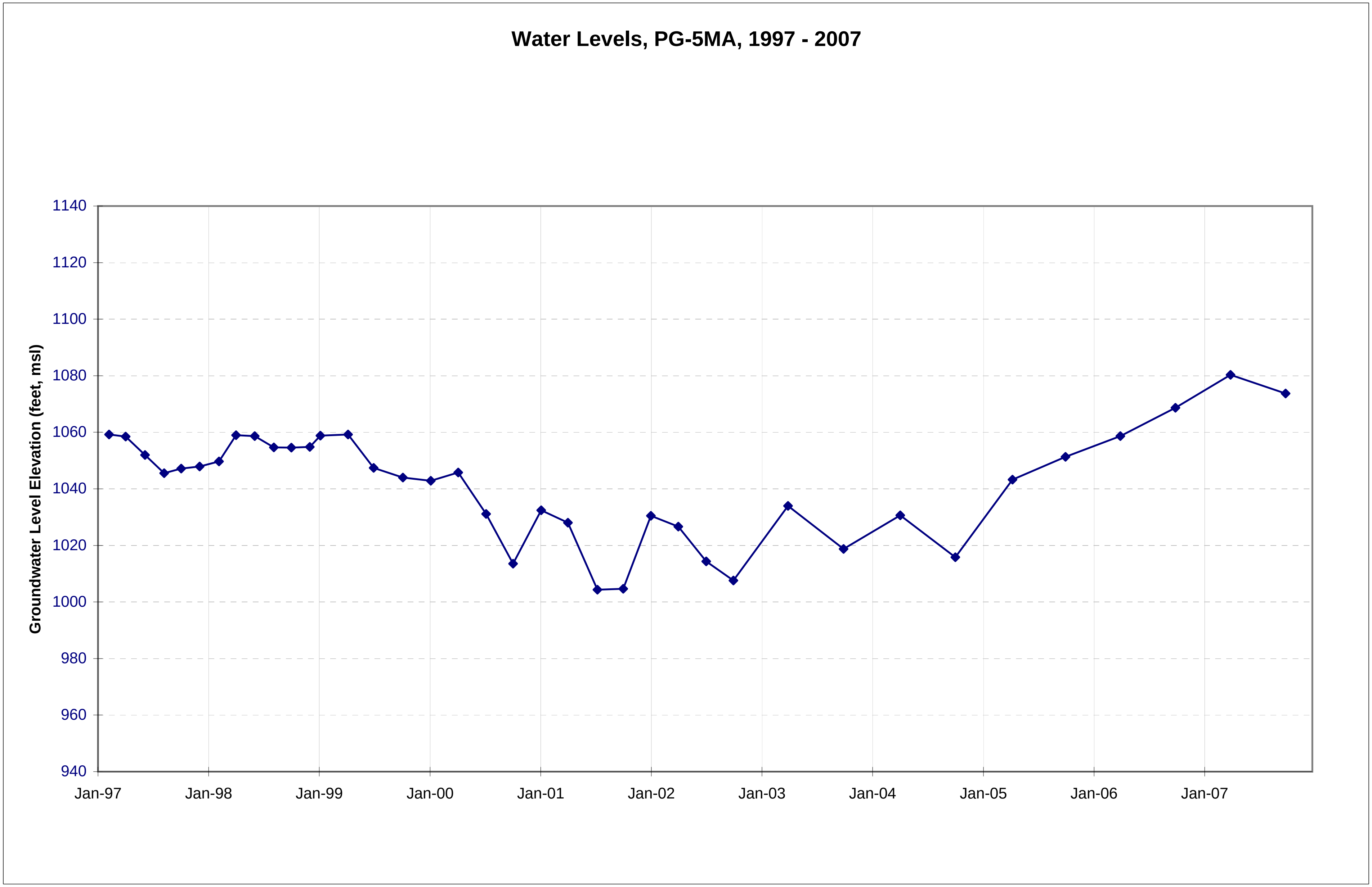
Jan-05
Jan-06
Jan-07



Water Levels, PG-5MA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1140
1120
1100
1080
1060
1040
1020
1000
980
960
940
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
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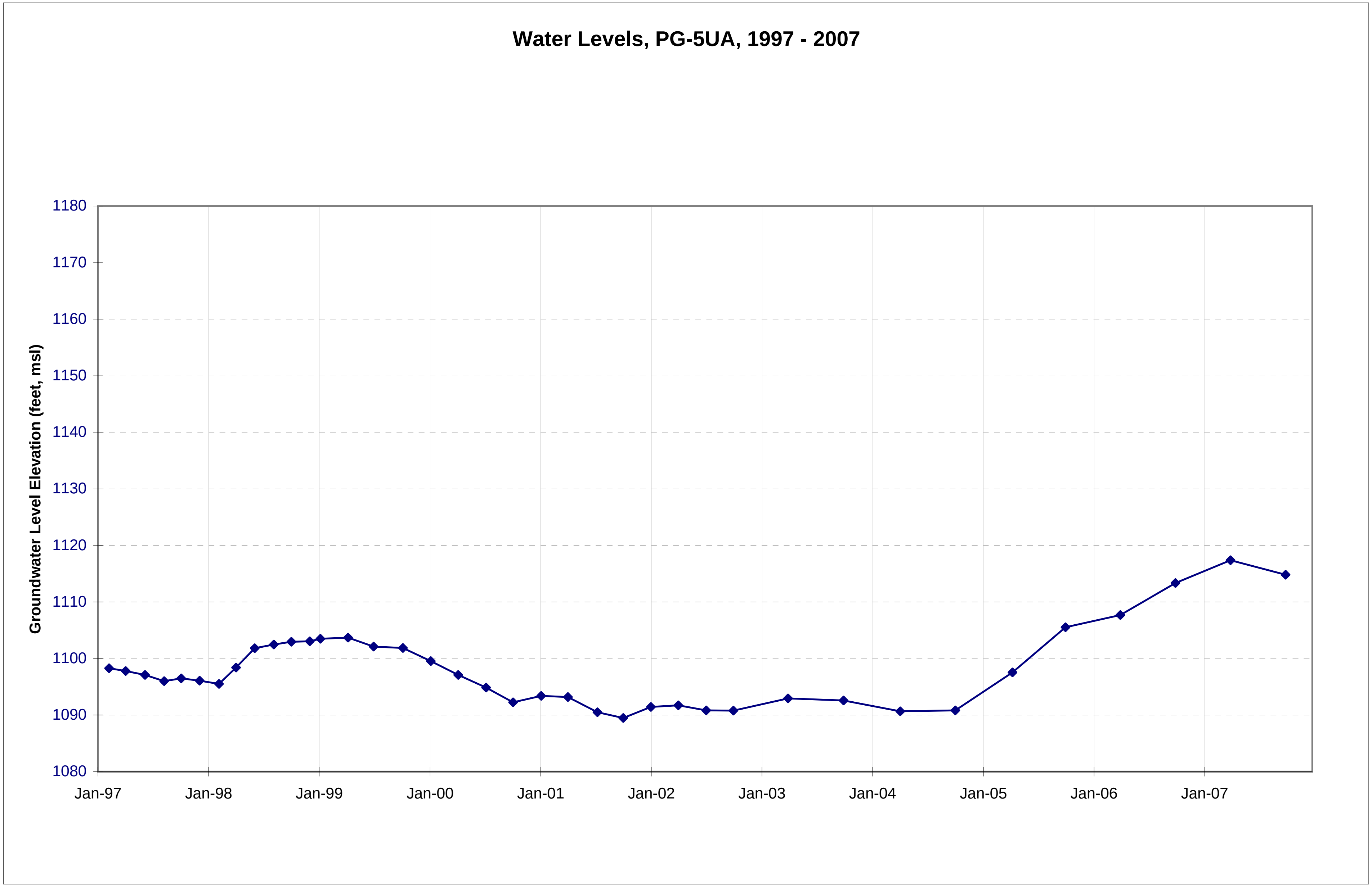
Jan-05
Jan-06
Jan-07



Water Levels, PG-5UA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1180
1170
1160
1150
1140
1130
1120
1110
1100
1090
1080
Jan-97
Jan-98
Jan-99
Jan-00
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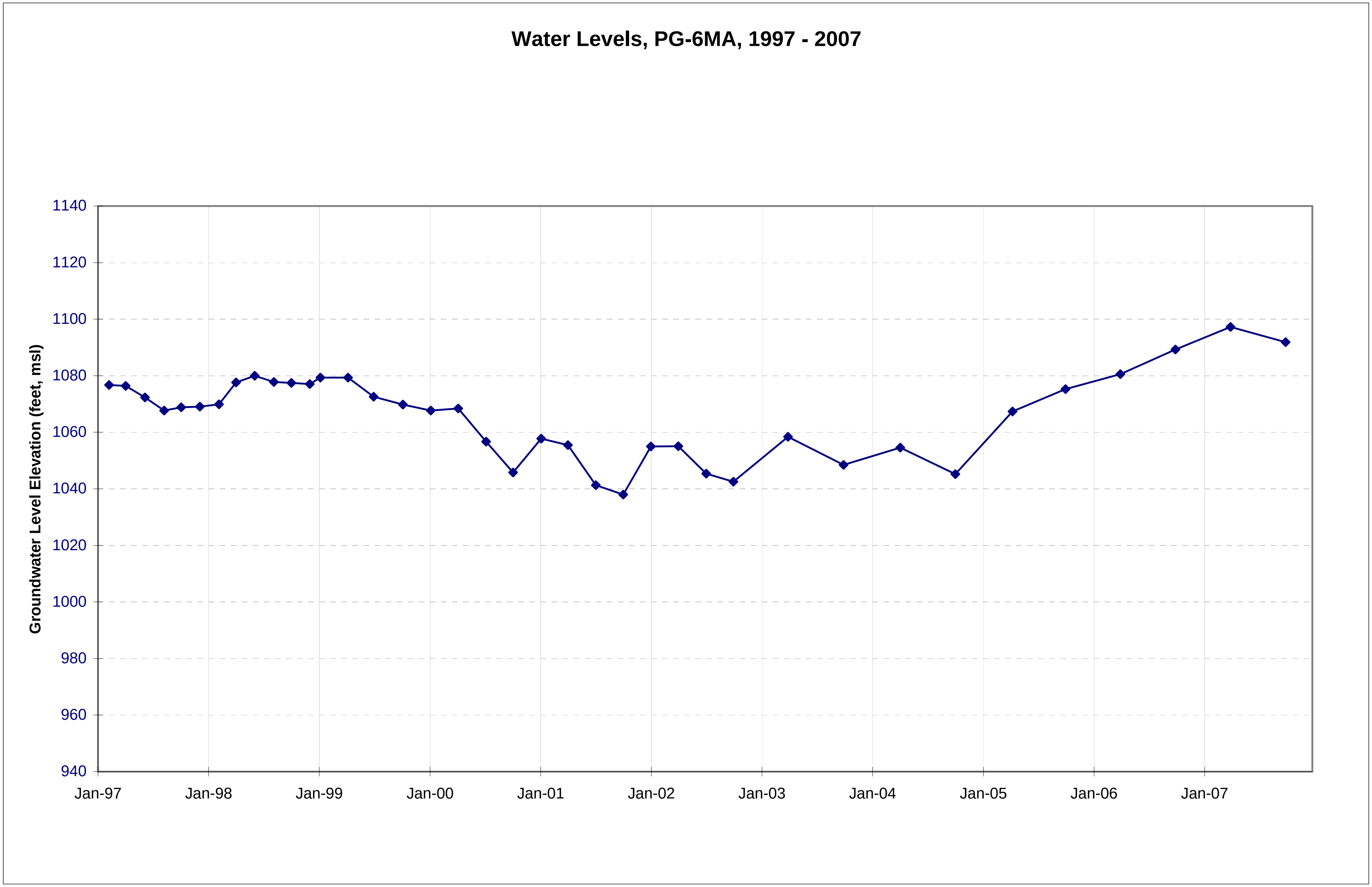
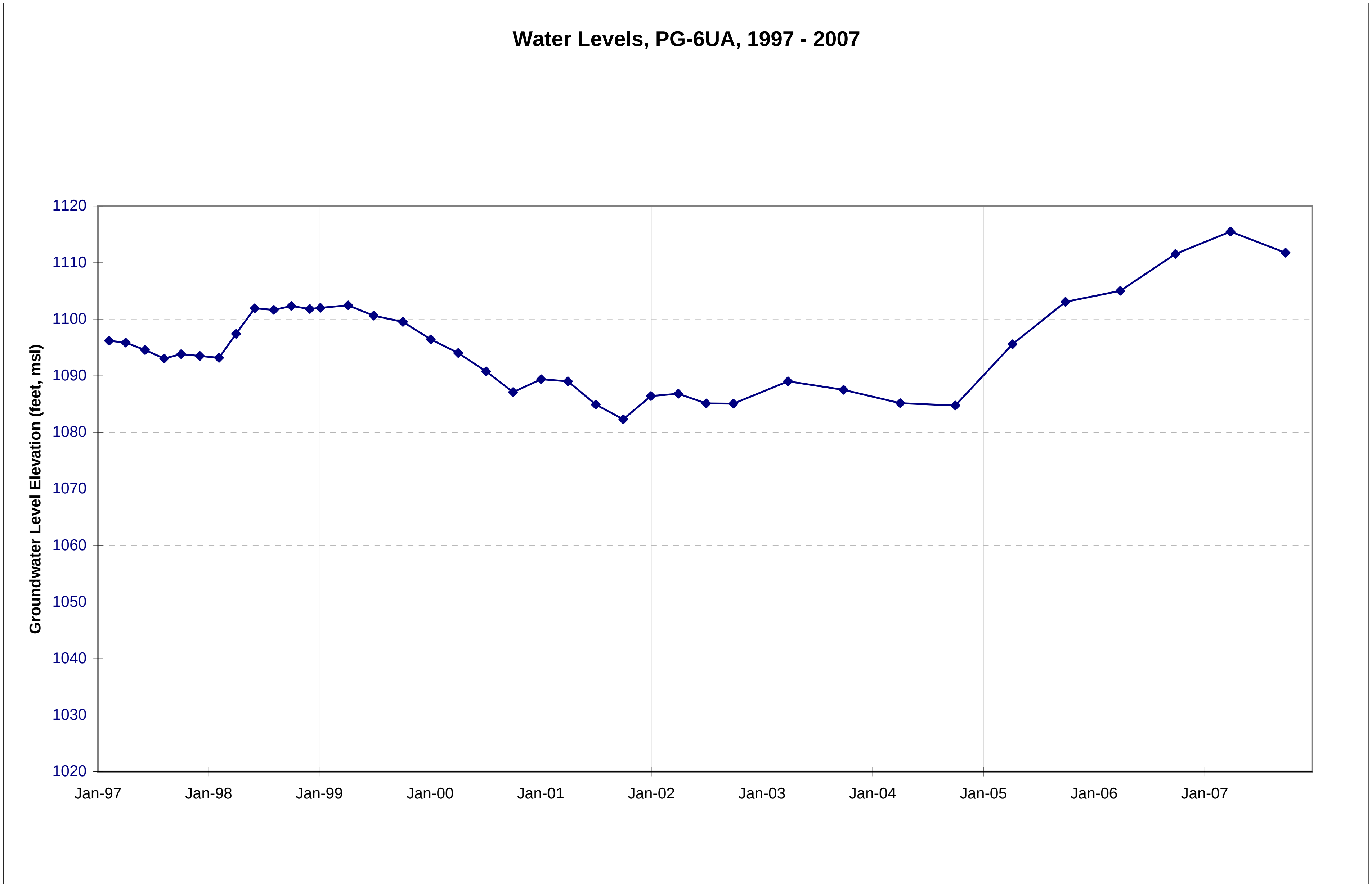
Jan-05
Jan-06
Jan-07


Water Levels, PG-6MA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1140
1120
1100
1080
1060
1040
1020
1000
980
960
940
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07


Water Levels, PG-6UA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1120
1110
1100
1090
1080
1070
1060
1050
1040
1030
1020
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
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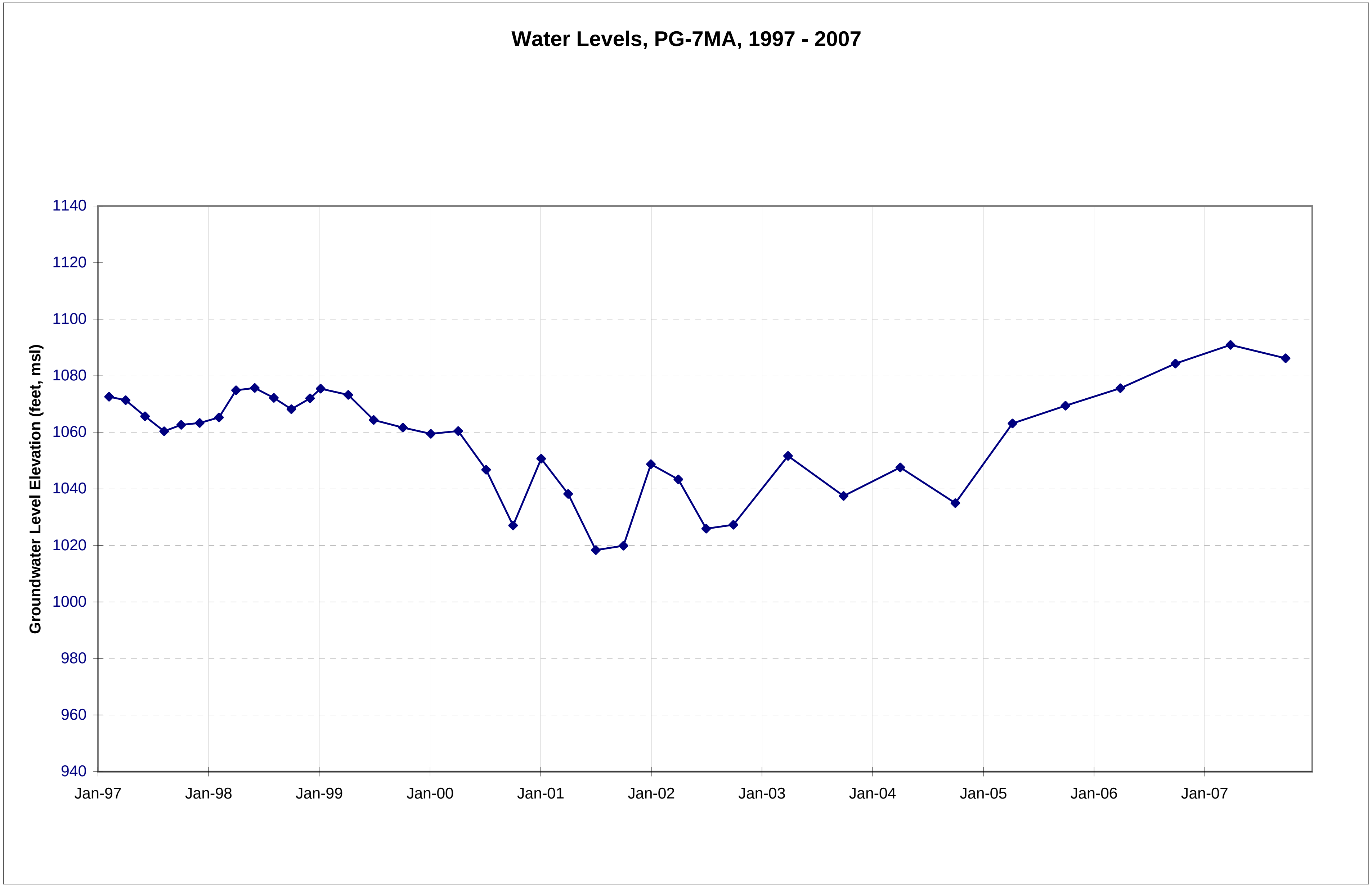
Jan-06
Jan-07


Water Levels, PG-7MA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1140
1120
1100
1080
1060
1040
1020
1000
980
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940
Jan-97
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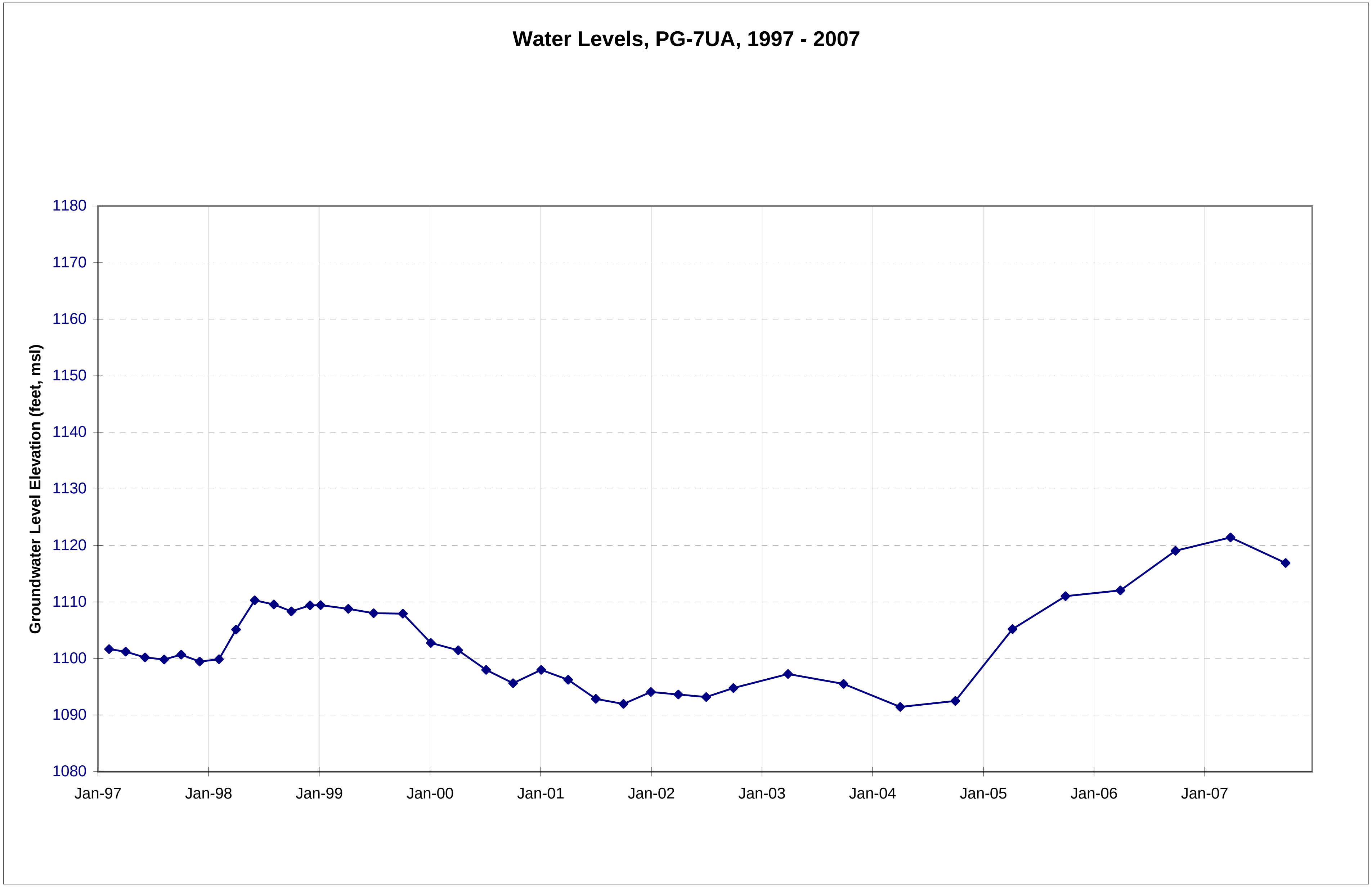
Jan-05
Jan-06
Jan-07



Water Levels, PG-7UA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1180
1170
1160
1150
1140
1130
1120
1110
1100
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1080
Jan-97
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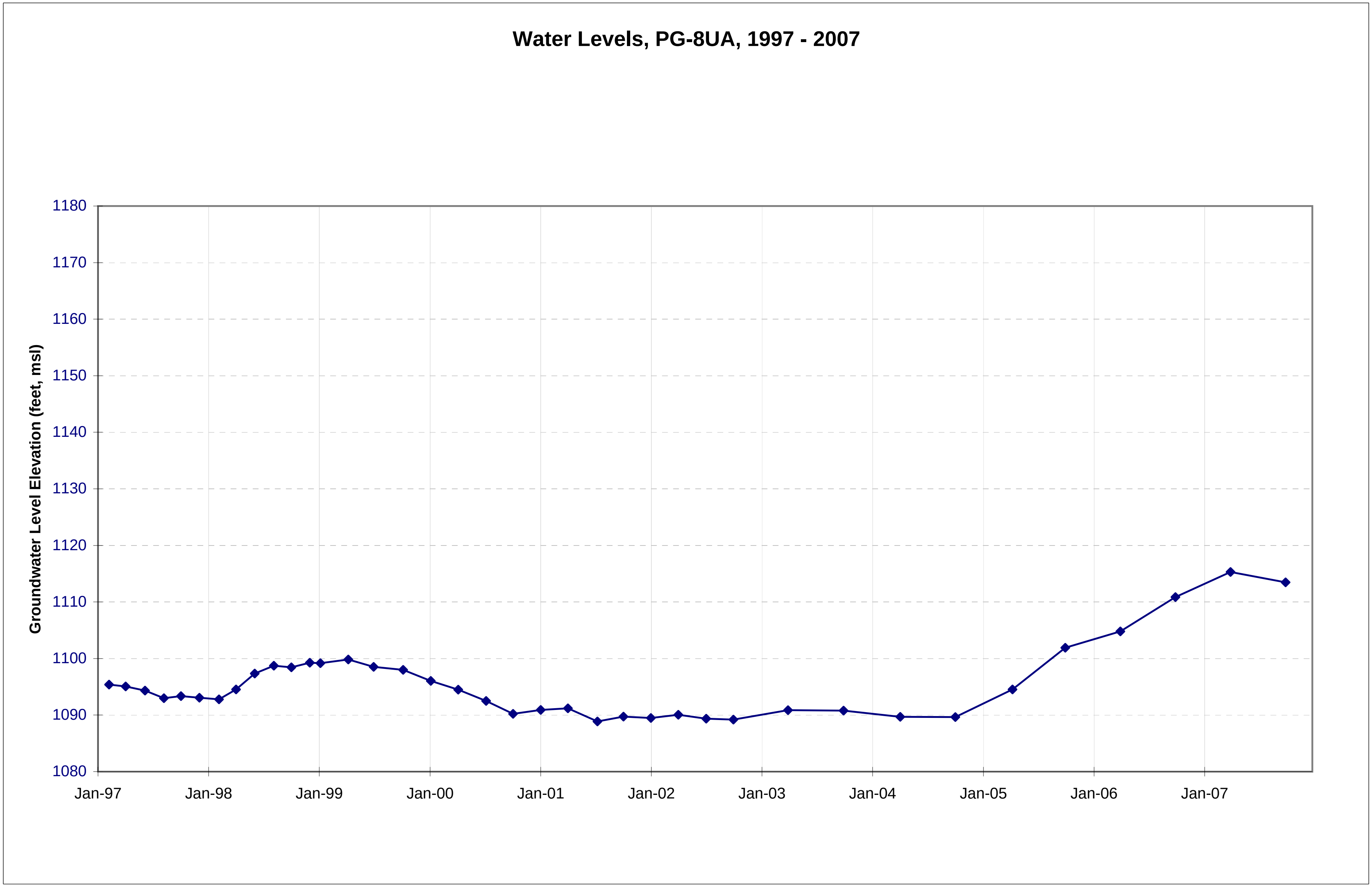
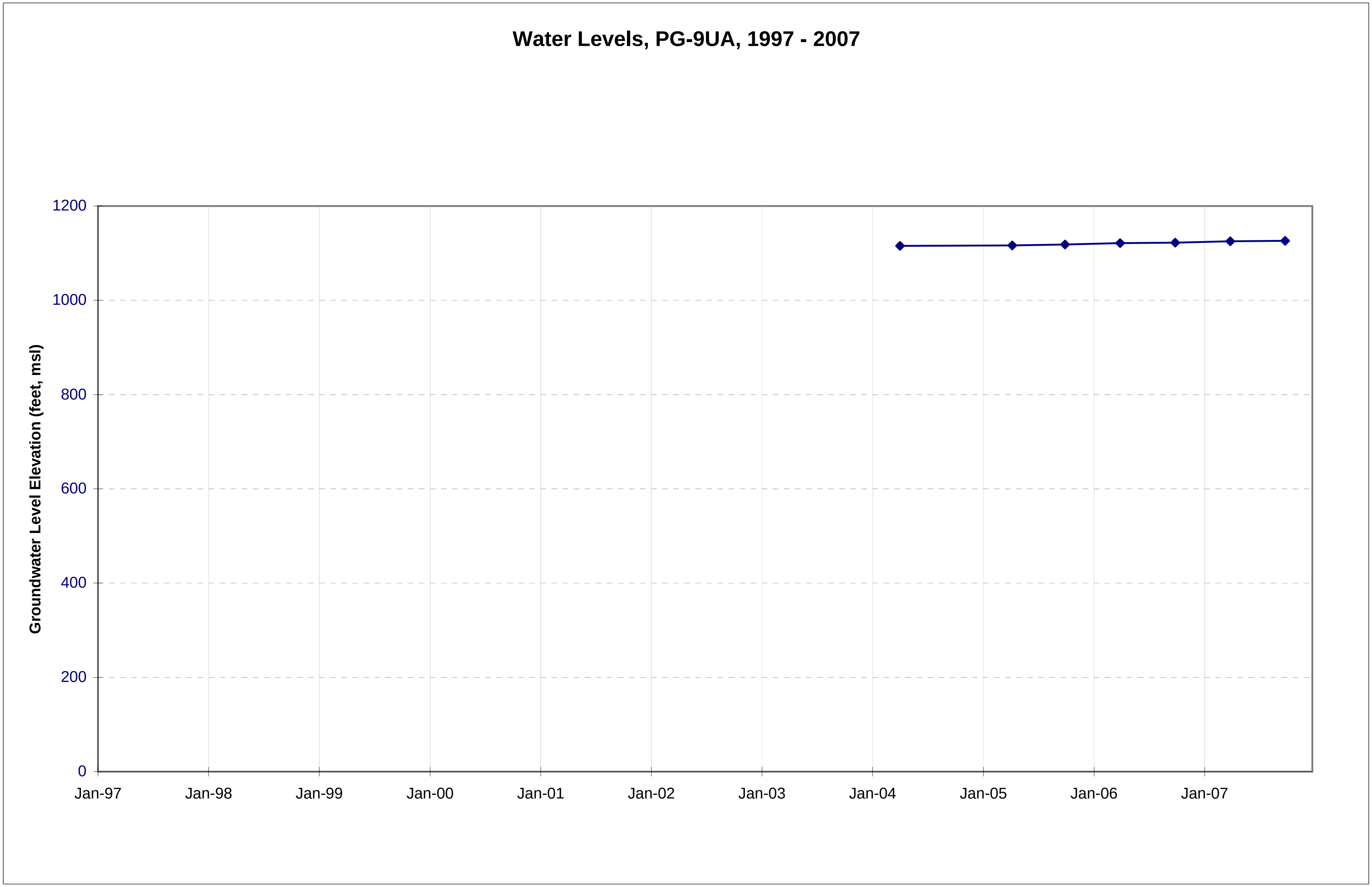
Jan-05
Jan-06
Jan-07


Water Levels, PG-8UA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1180
1170
1160
1150
1140
1130
1120
1110
1100
1090
1080
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07


Water Levels, PG-9UA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1200
1000
800
600
400
200
0
Jan-97
Jan-98
Jan-99
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Jan-02
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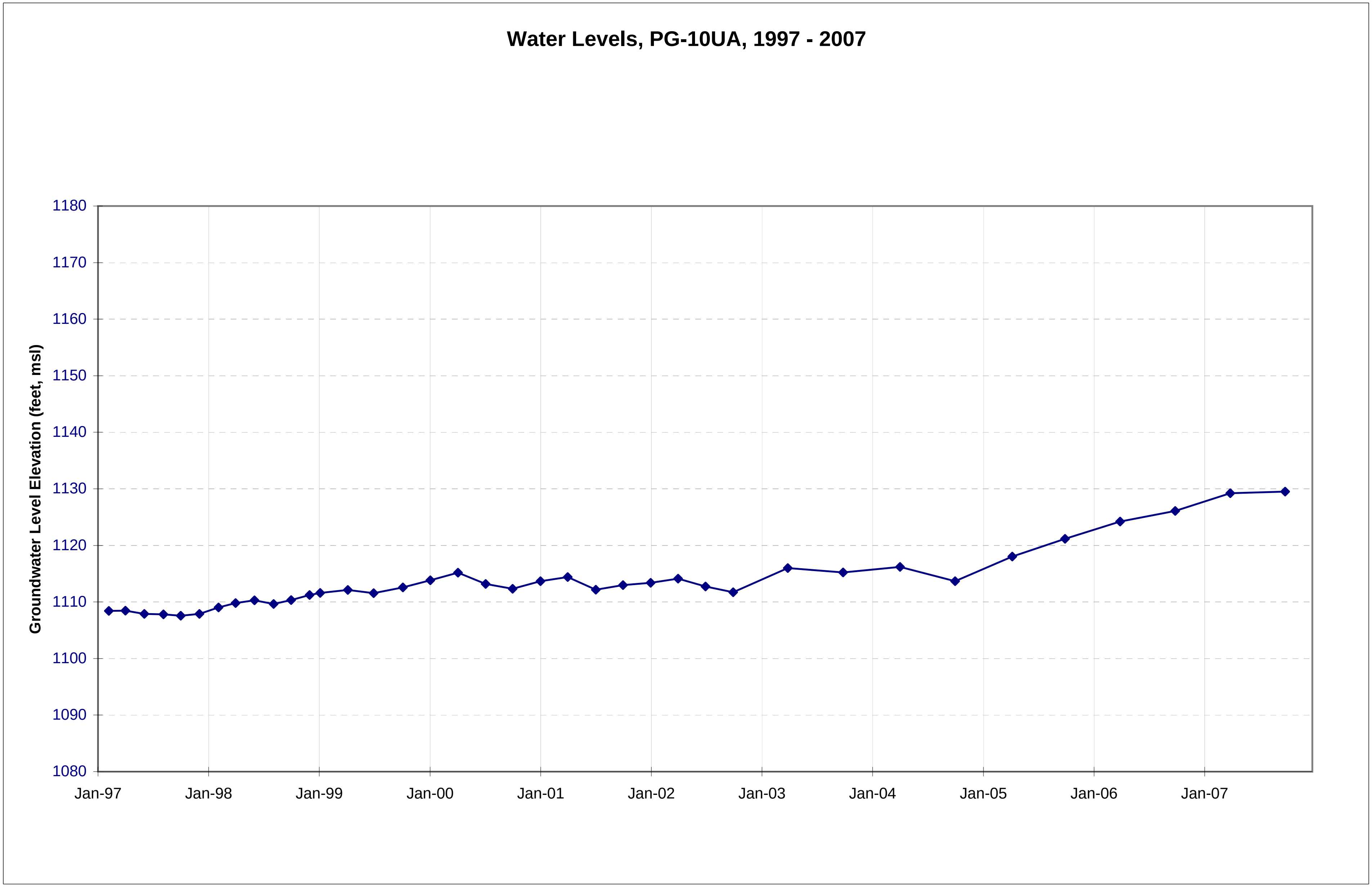
Jan-05
Jan-06
Jan-07


Water Levels, PG-10UA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1180
1170
1160
1150
1140
1130
1120
1110
1100
1090
1080
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
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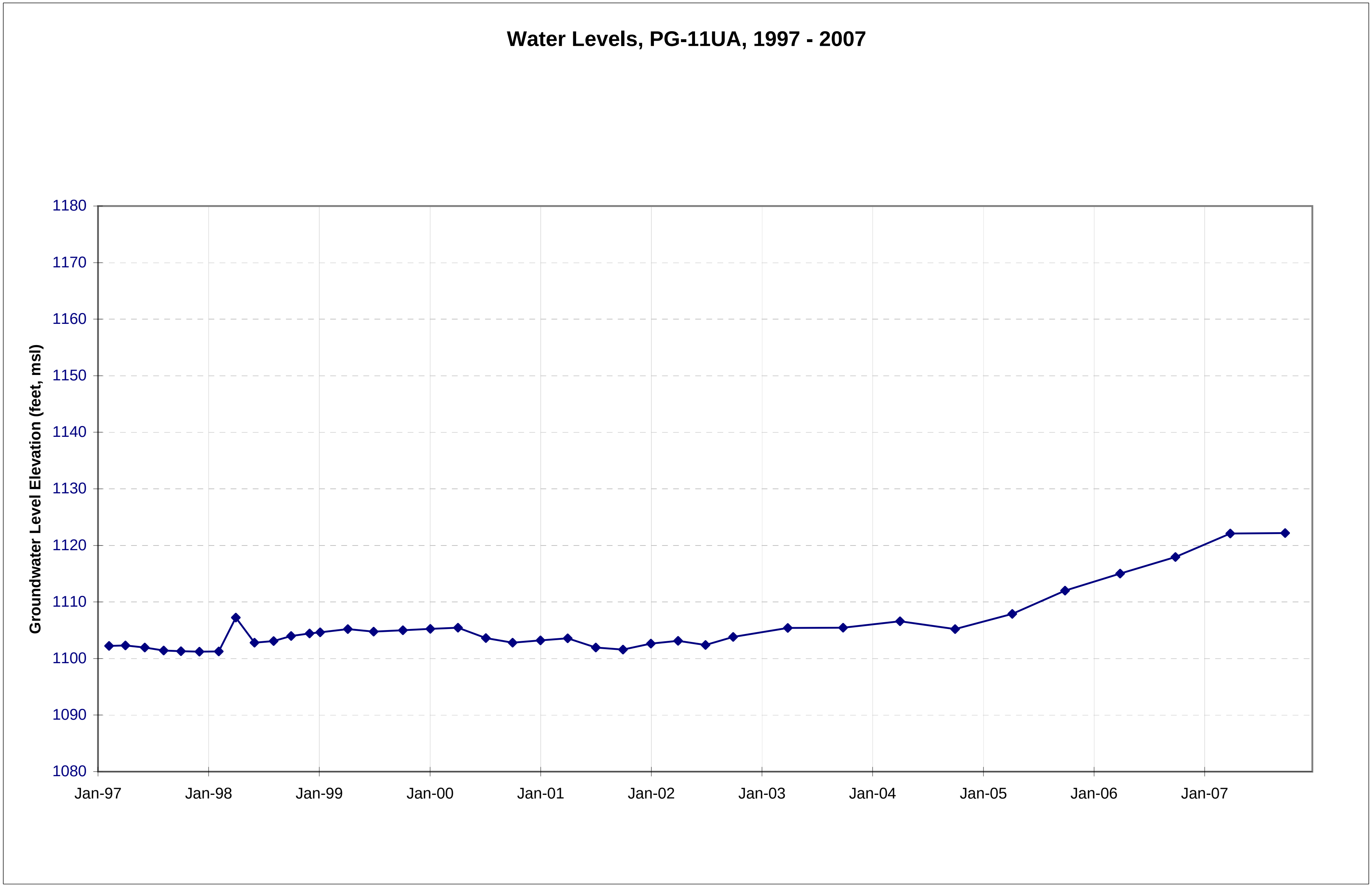
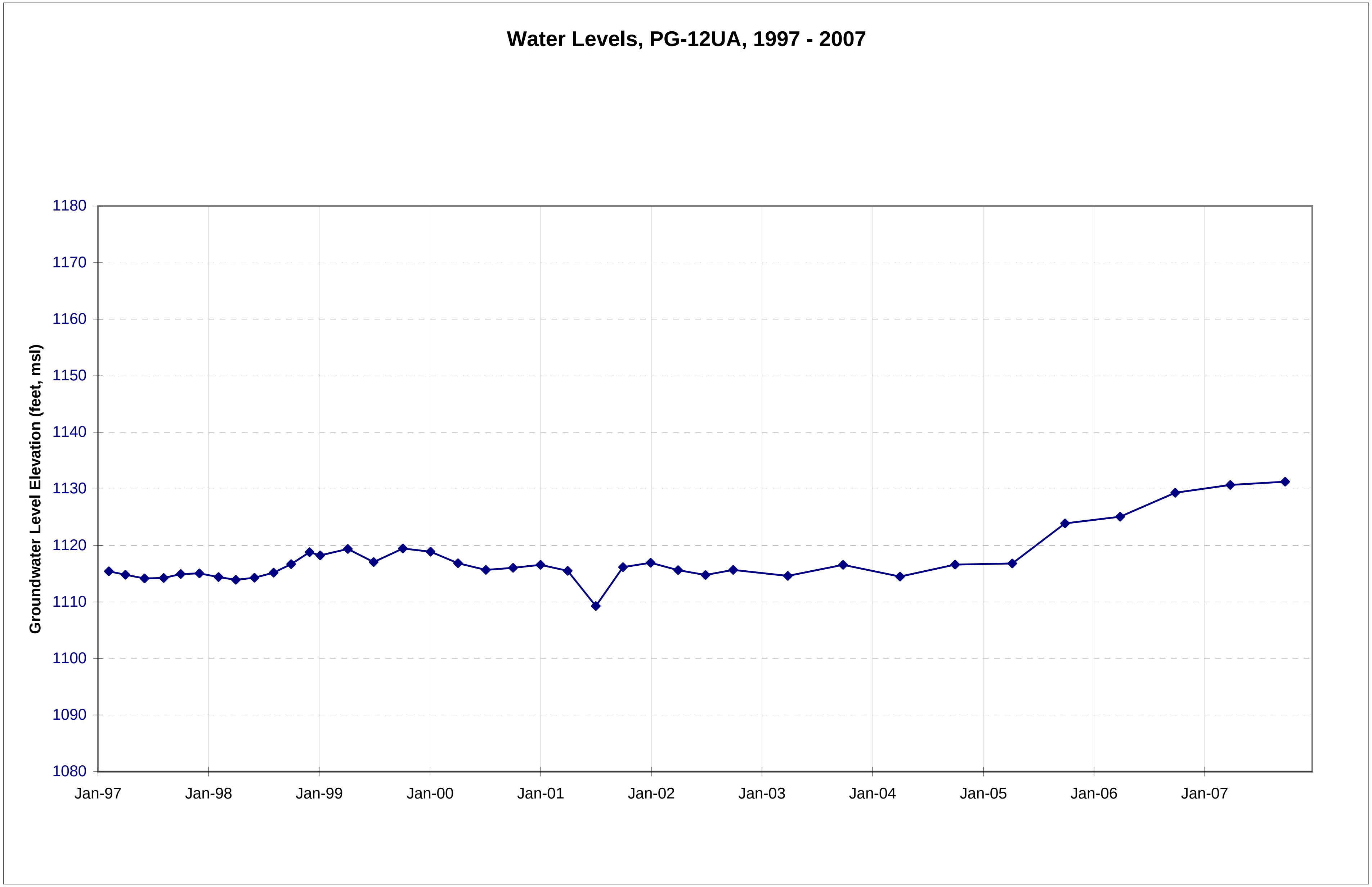
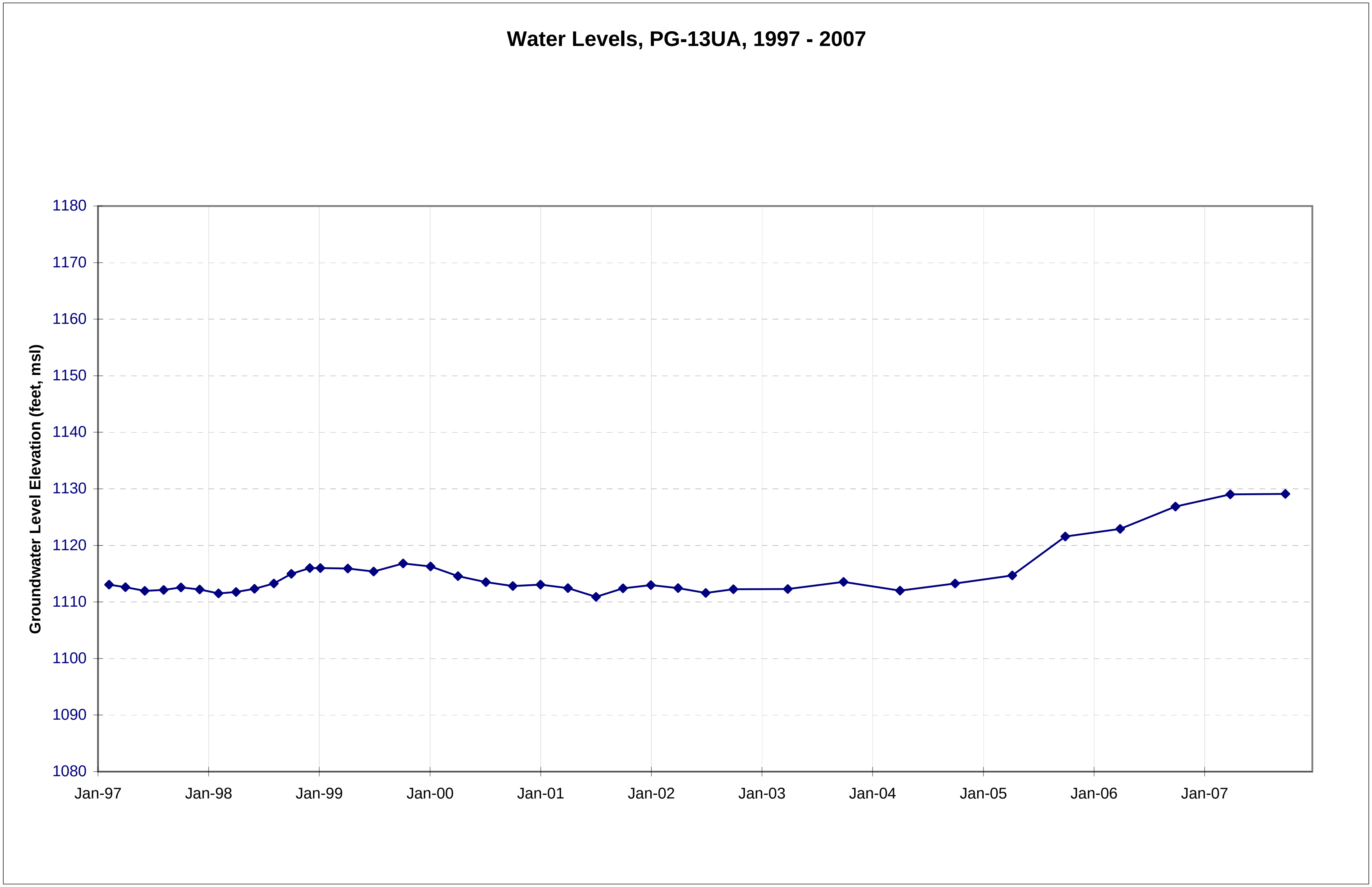
Jan-04
Jan-05
Jan-06
Jan-07

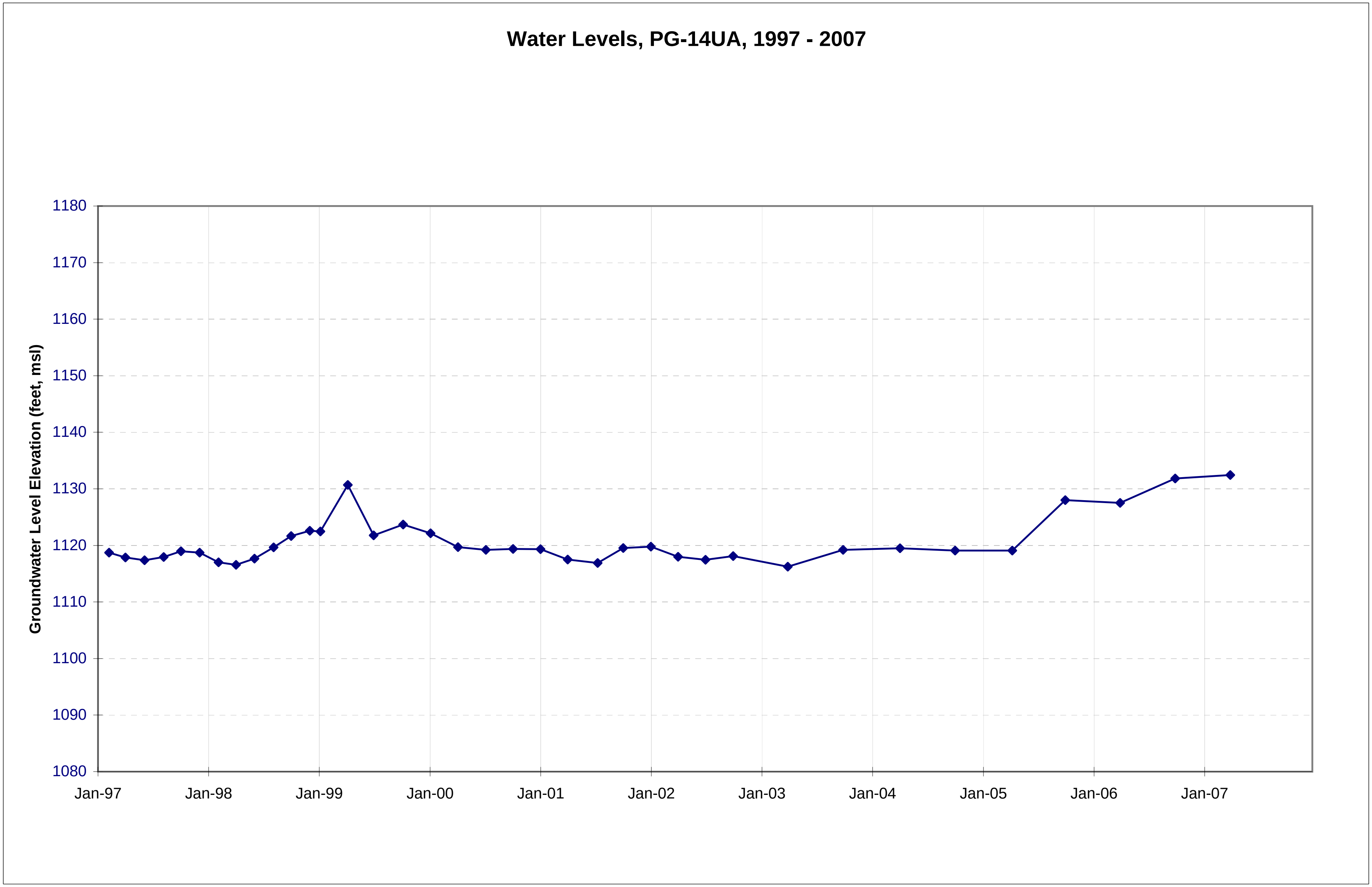

Water Levels, PG-11UA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1180
1170
1160
1150
1140
1130
1120
1110
1100
1090
1080
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

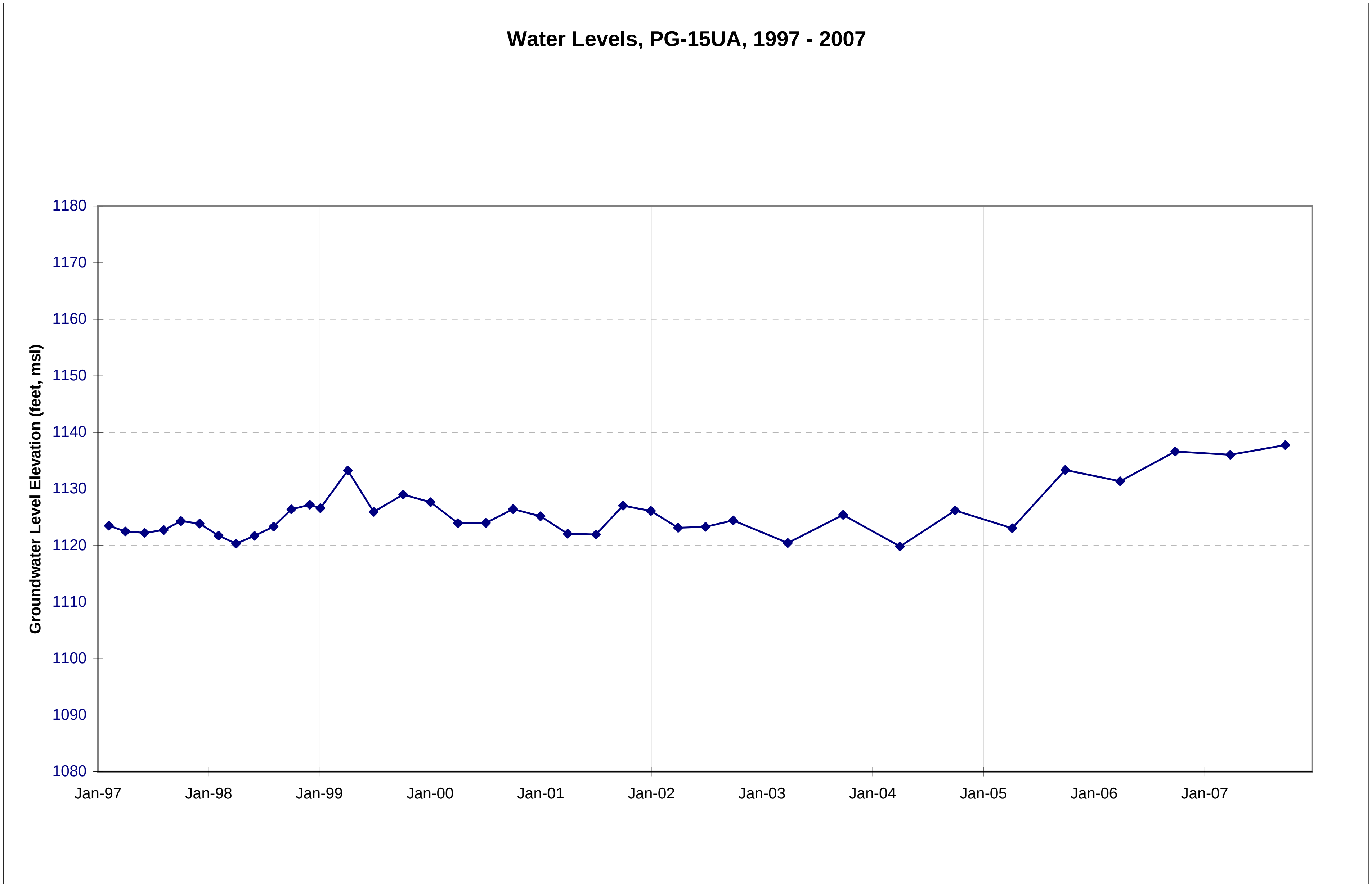


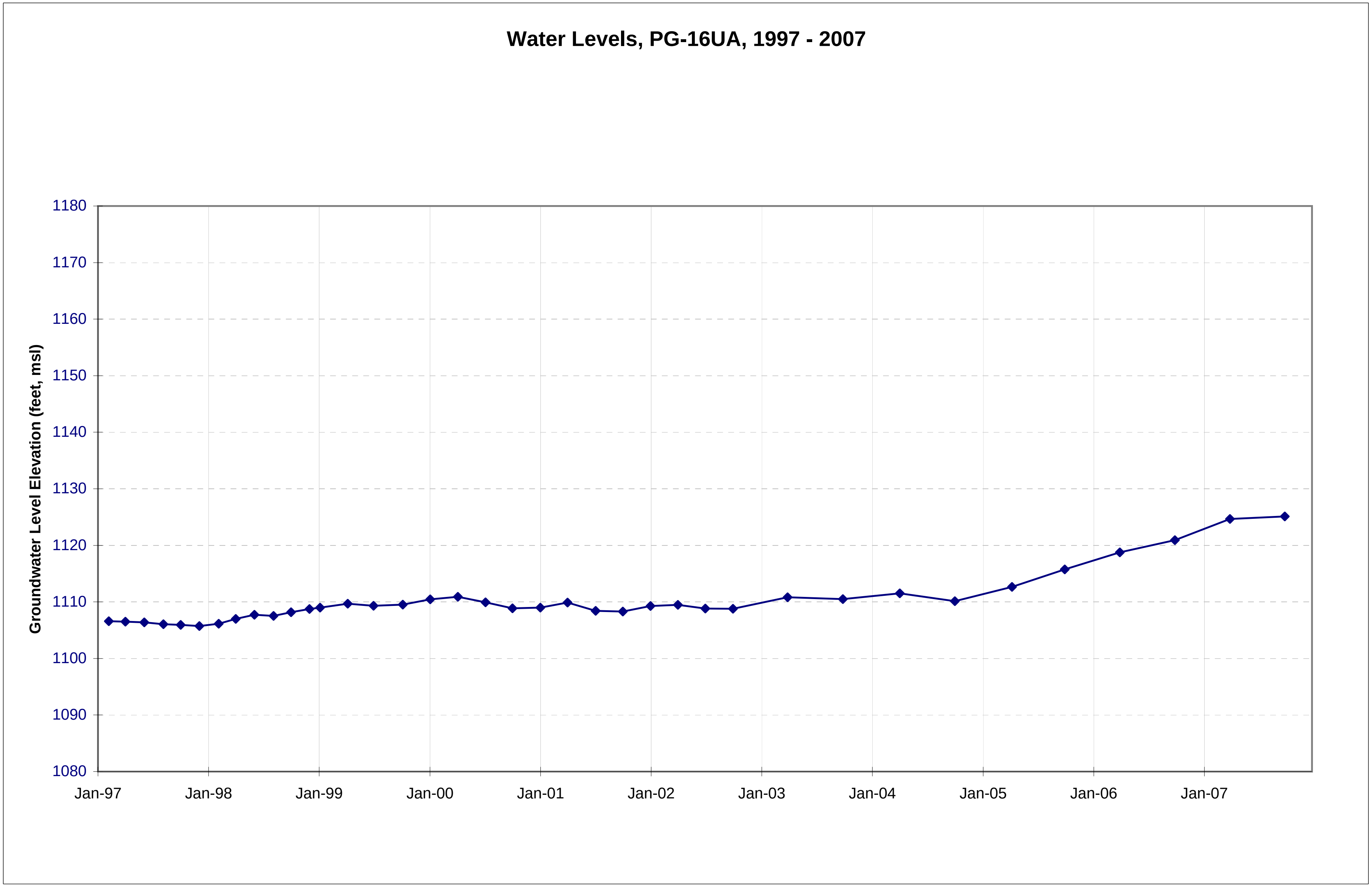
Water Levels, PG-12UA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1180
1170
1160
1150
1140
1130
1120
1110
1100
1090
1080
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07



Water Levels, PG-13UA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1180
1170
1160
1150
1140
1130
1120
1110
1100
1090
1080
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07


Water Levels, PG-14UA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1180
1170
1160
1150
1140
1130
1120
1110
1100
1090
1080
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07


Water Levels, PG-15UA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1180
1170
1160
1150
1140
1130
1120
1110
1100
1090
1080
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07



Water Levels, PG-16UA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1180
1170
1160
1150
1140
1130
1120
1110
1100
1090
1080
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
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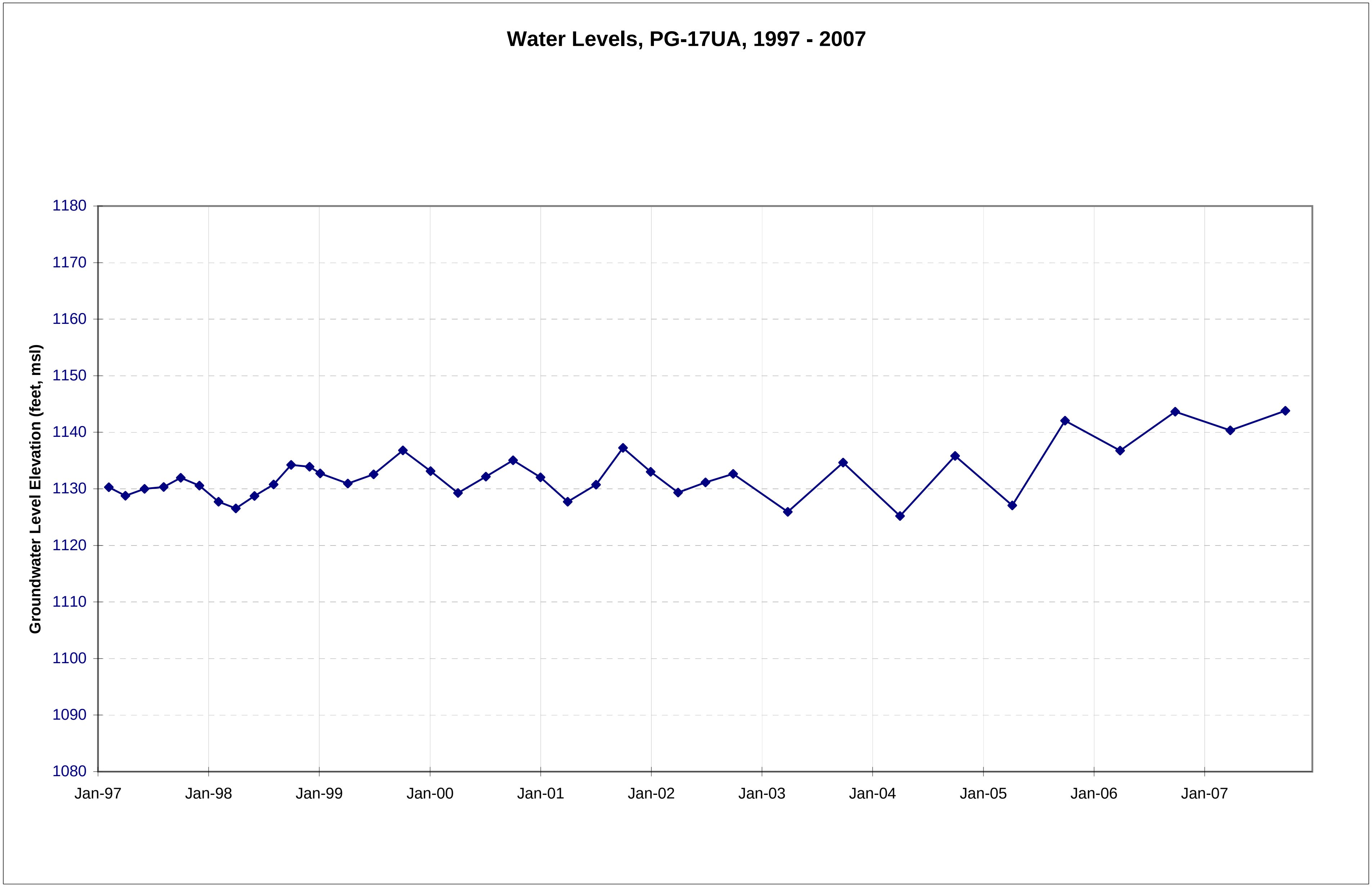
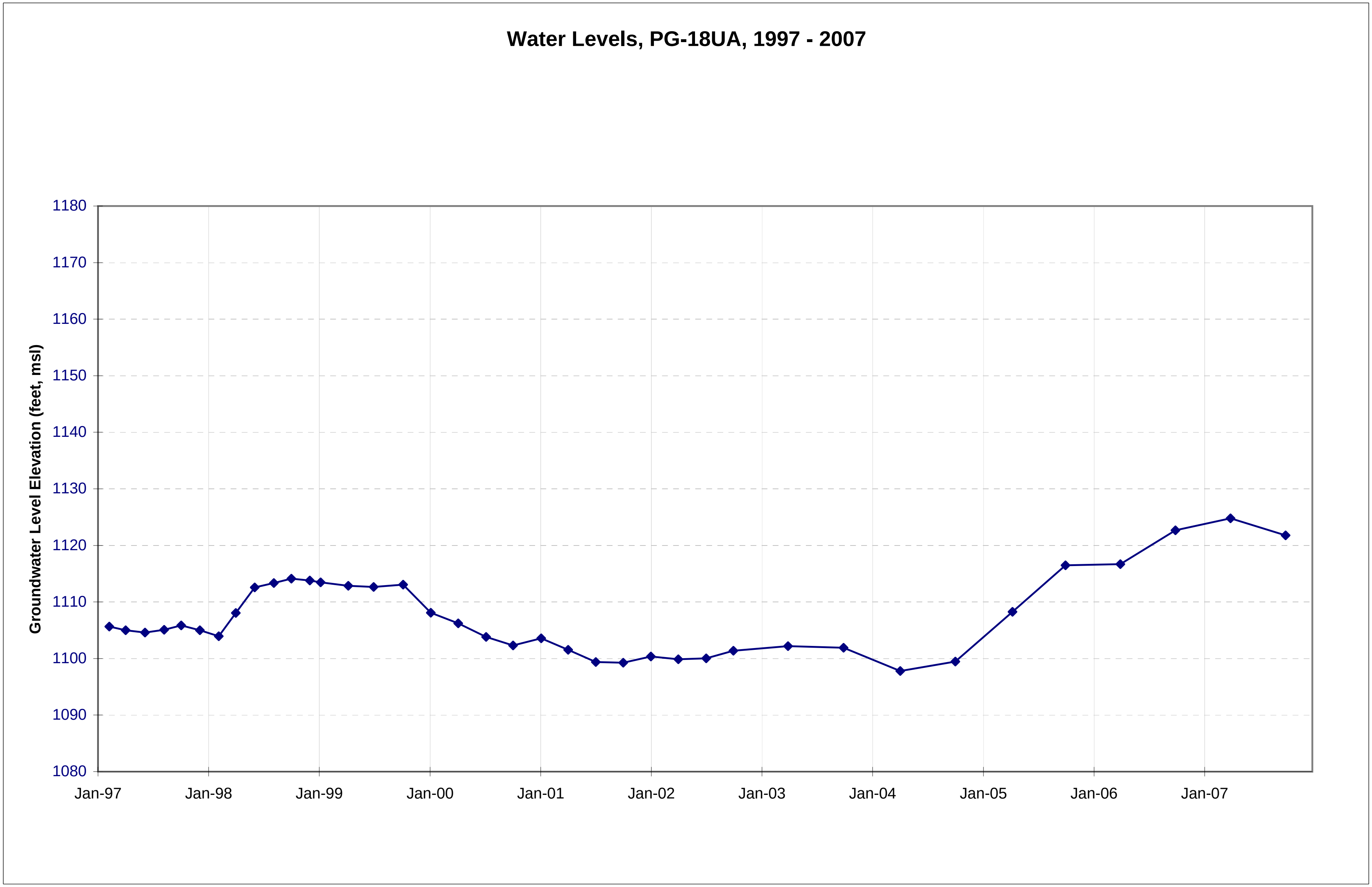
Jan-05
Jan-06
Jan-07



Water Levels, PG-17UA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1180
1170
1160
1150
1140
1130
1120
1110
1100
1090
1080
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07



Water Levels, PG-18UA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1180
1170
1160
1150
1140
1130
1120
1110
1100
1090
1080
Jan-97
Jan-98
Jan-99
Jan-00
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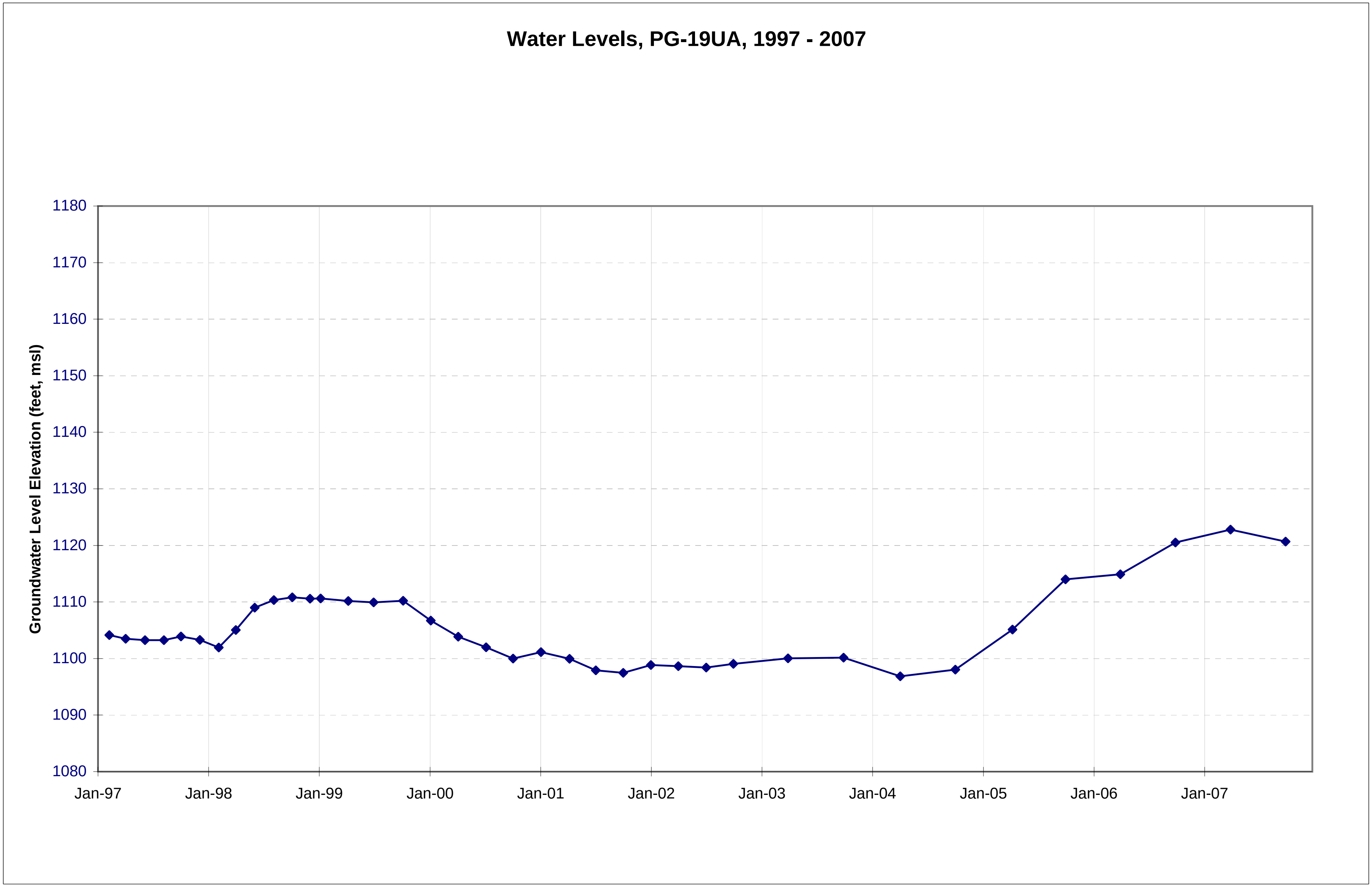
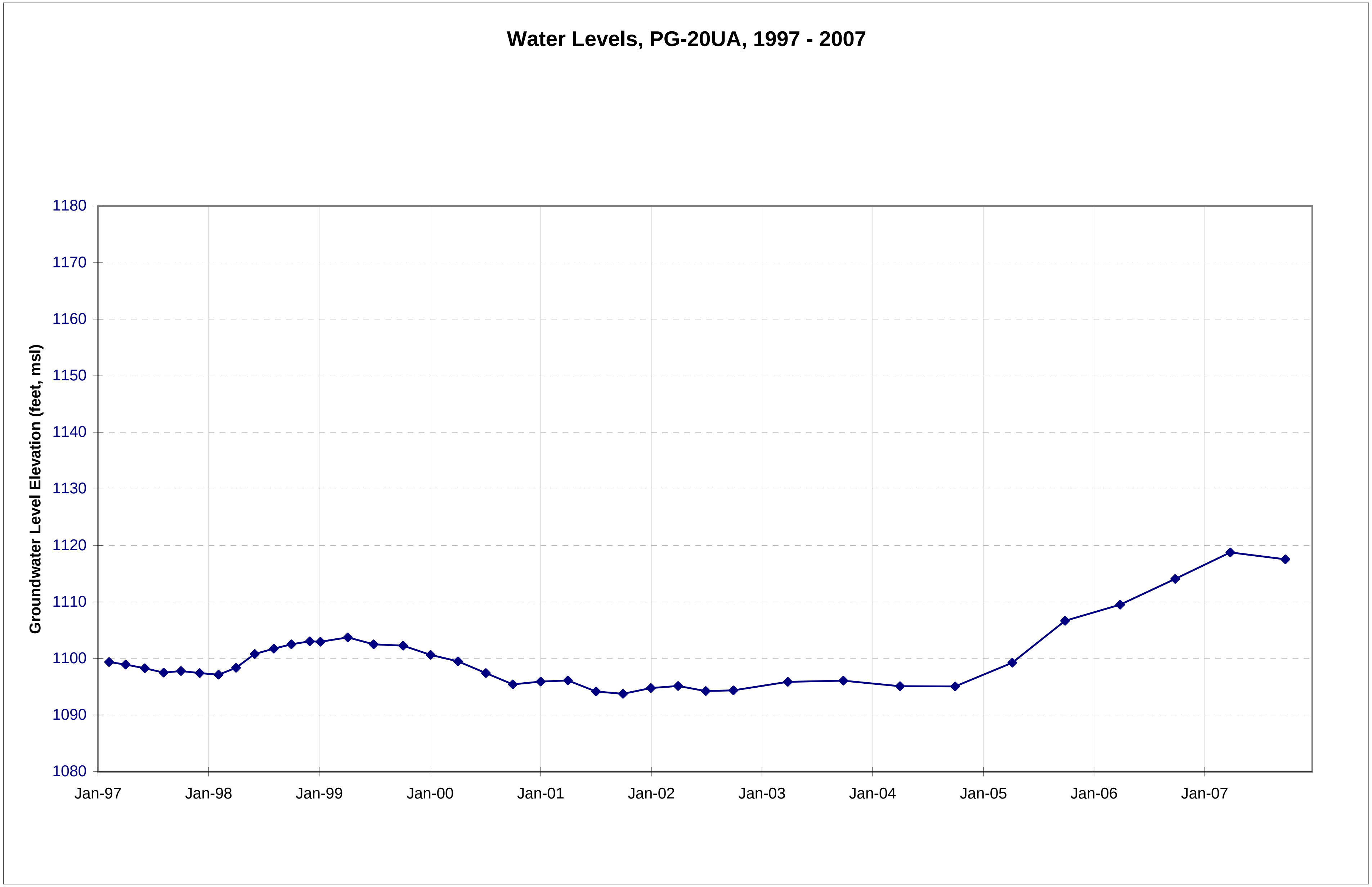
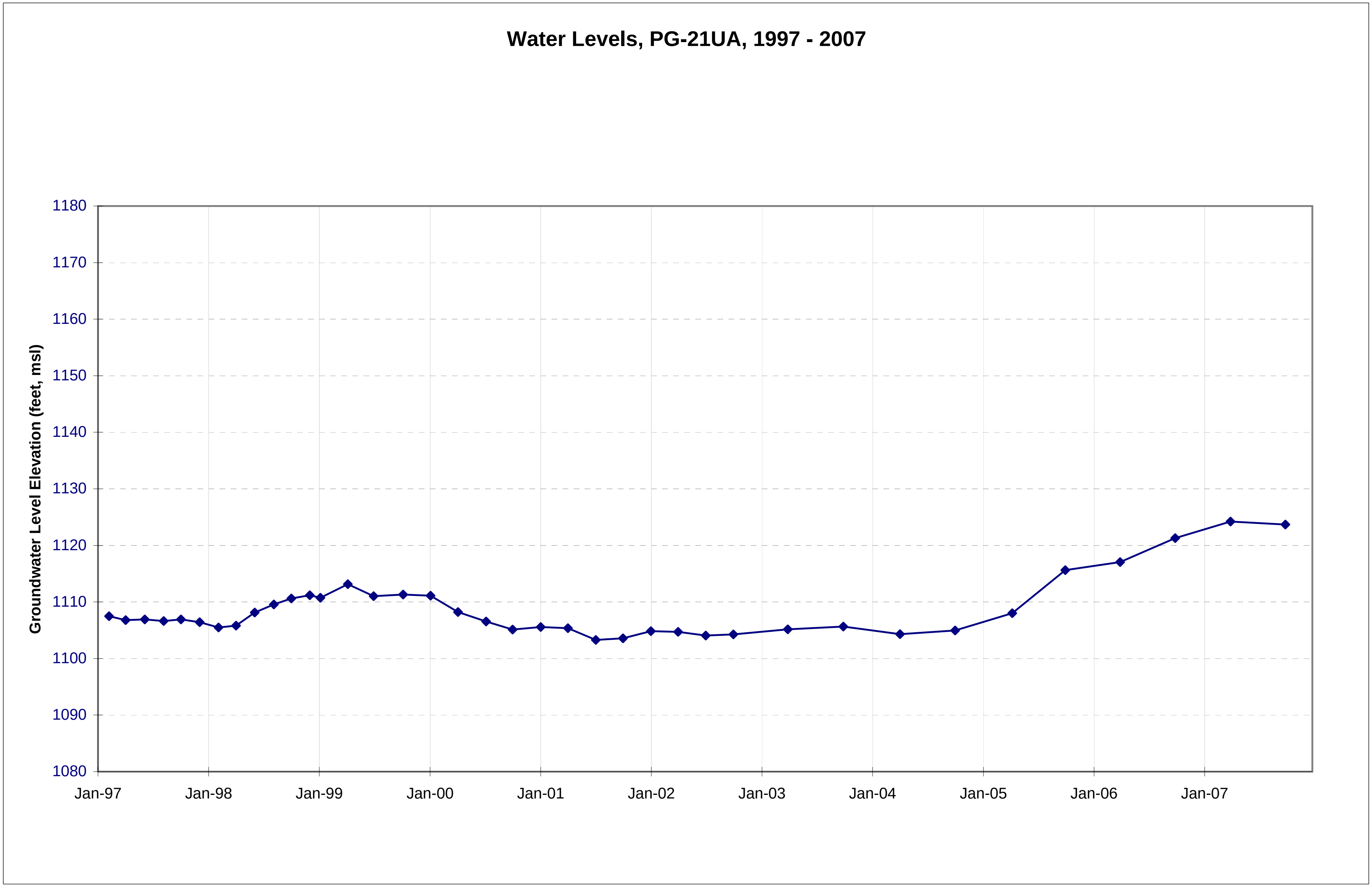
Jan-05
Jan-06
Jan-07

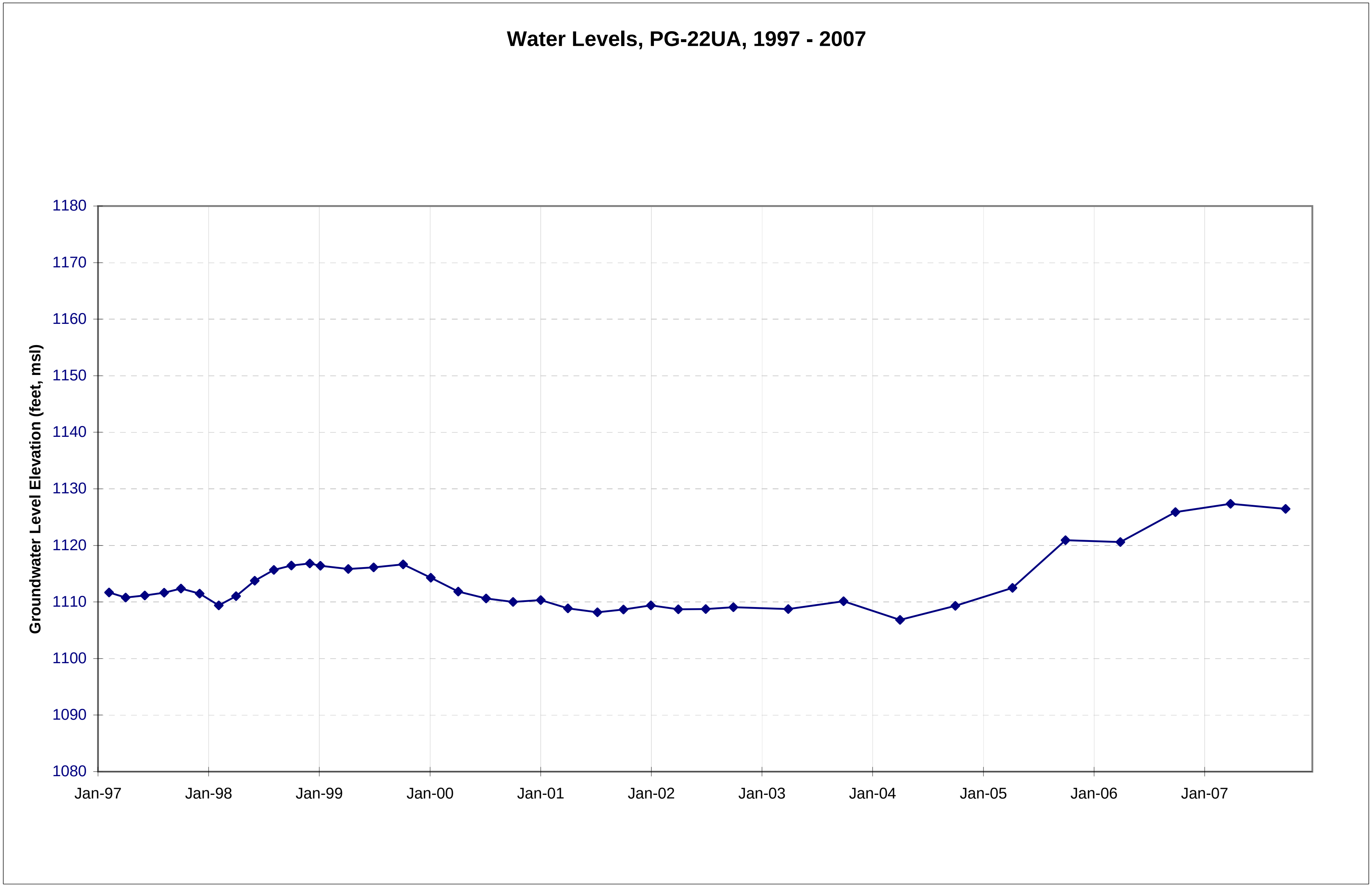


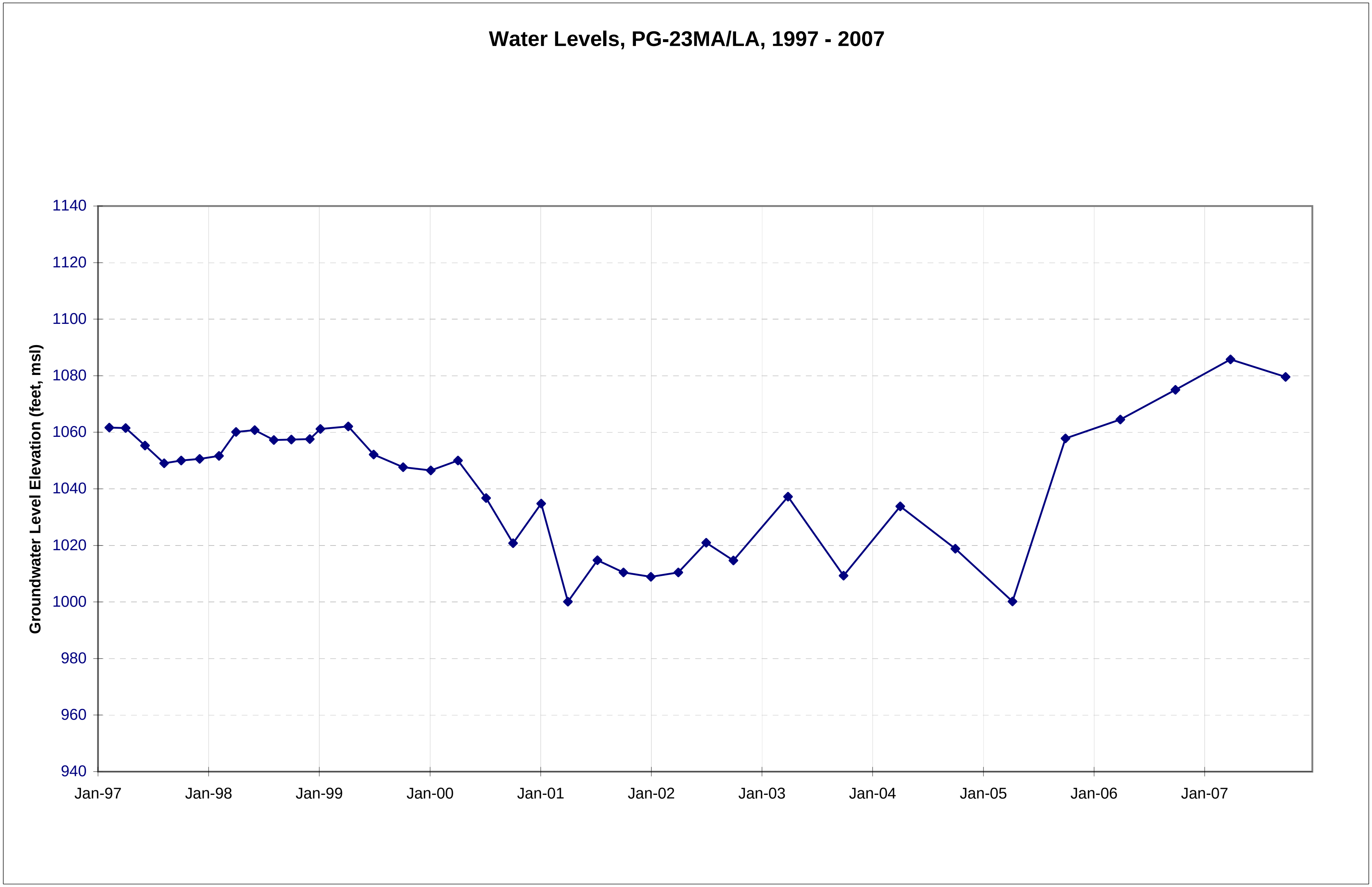
Water Levels, PG-19UA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1180
1170
1160
1150
1140
1130
1120
1110
1100
1090
1080
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07


Water Levels, PG-20UA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1180
1170
1160
1150
1140
1130
1120
1110
1100
1090
1080
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

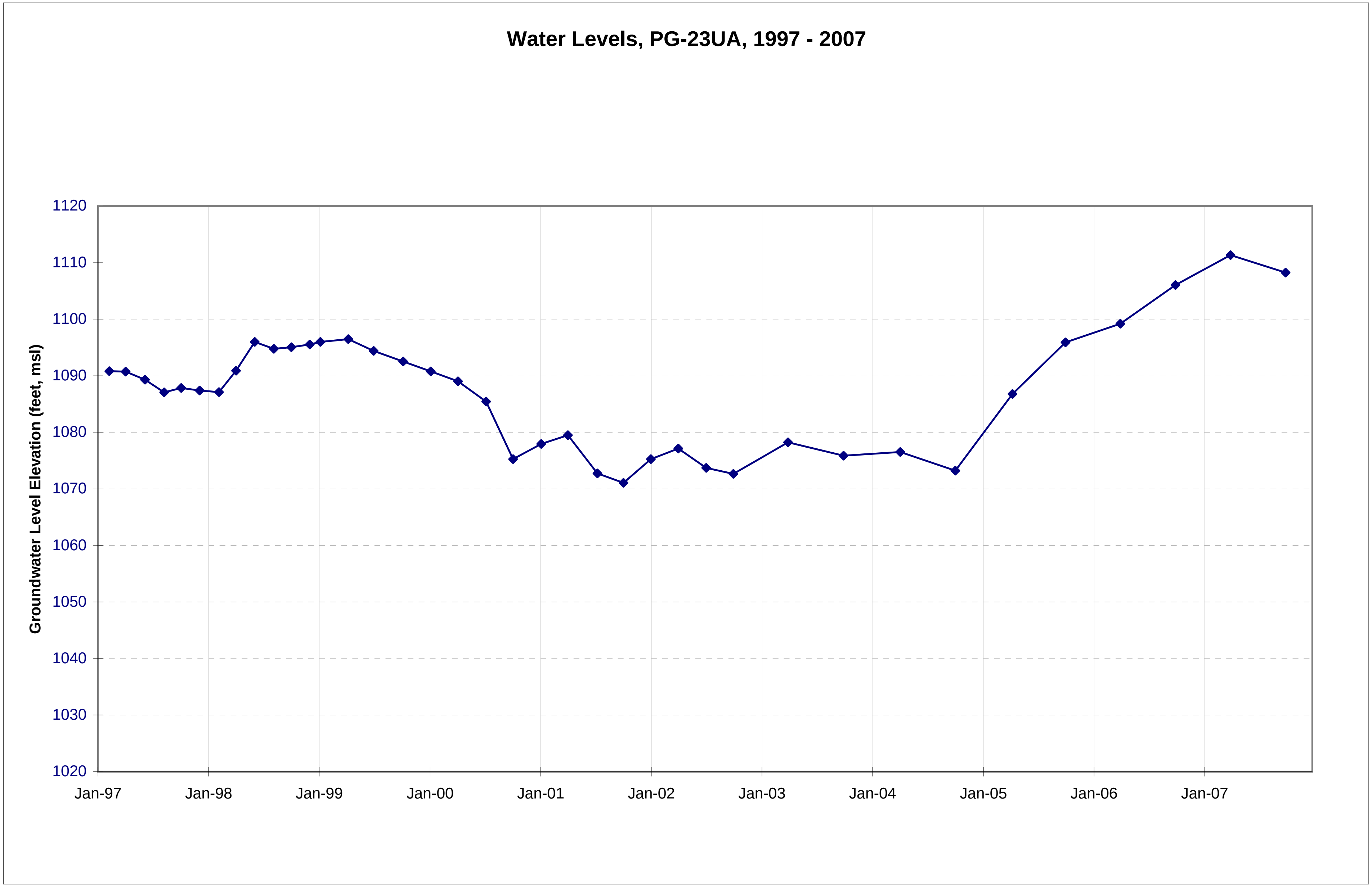


Water Levels, PG-21UA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1180
1170
1160
1150
1140
1130
1120
1110
1100
1090
1080
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07


Water Levels, PG-22UA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1180
1170
1160
1150
1140
1130
1120
1110
1100
1090
1080
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07



Water Levels, PG-23MA/LA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1140
1120
1100
1080
1060
1040
1020
1000
980
960
940
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07


Water Levels, PG-23UA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1120
1110
1100
1090
1080
1070
1060
1050
1040
1030
1020
Jan-97
Jan-98
Jan-99
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Jan-01
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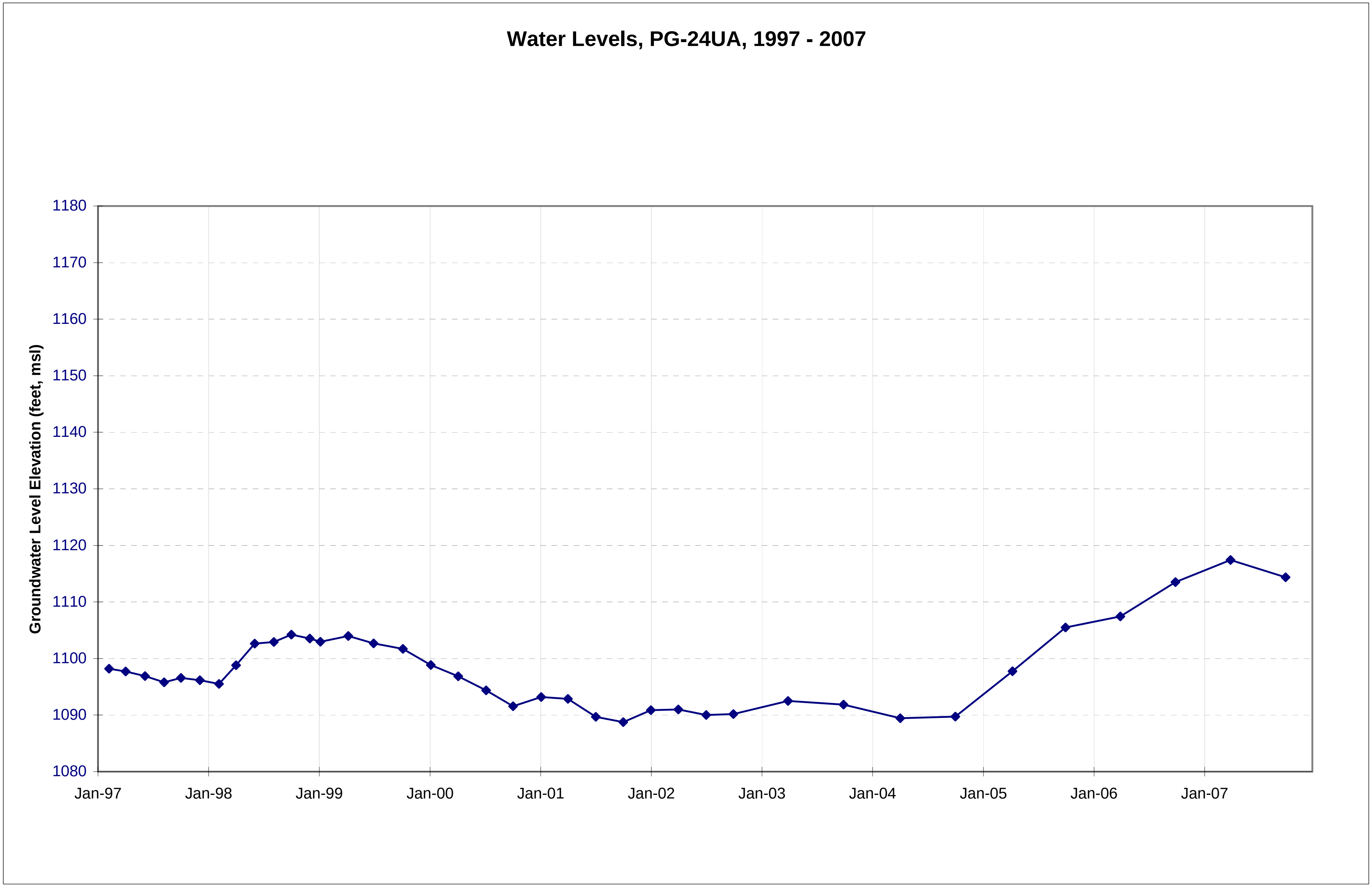
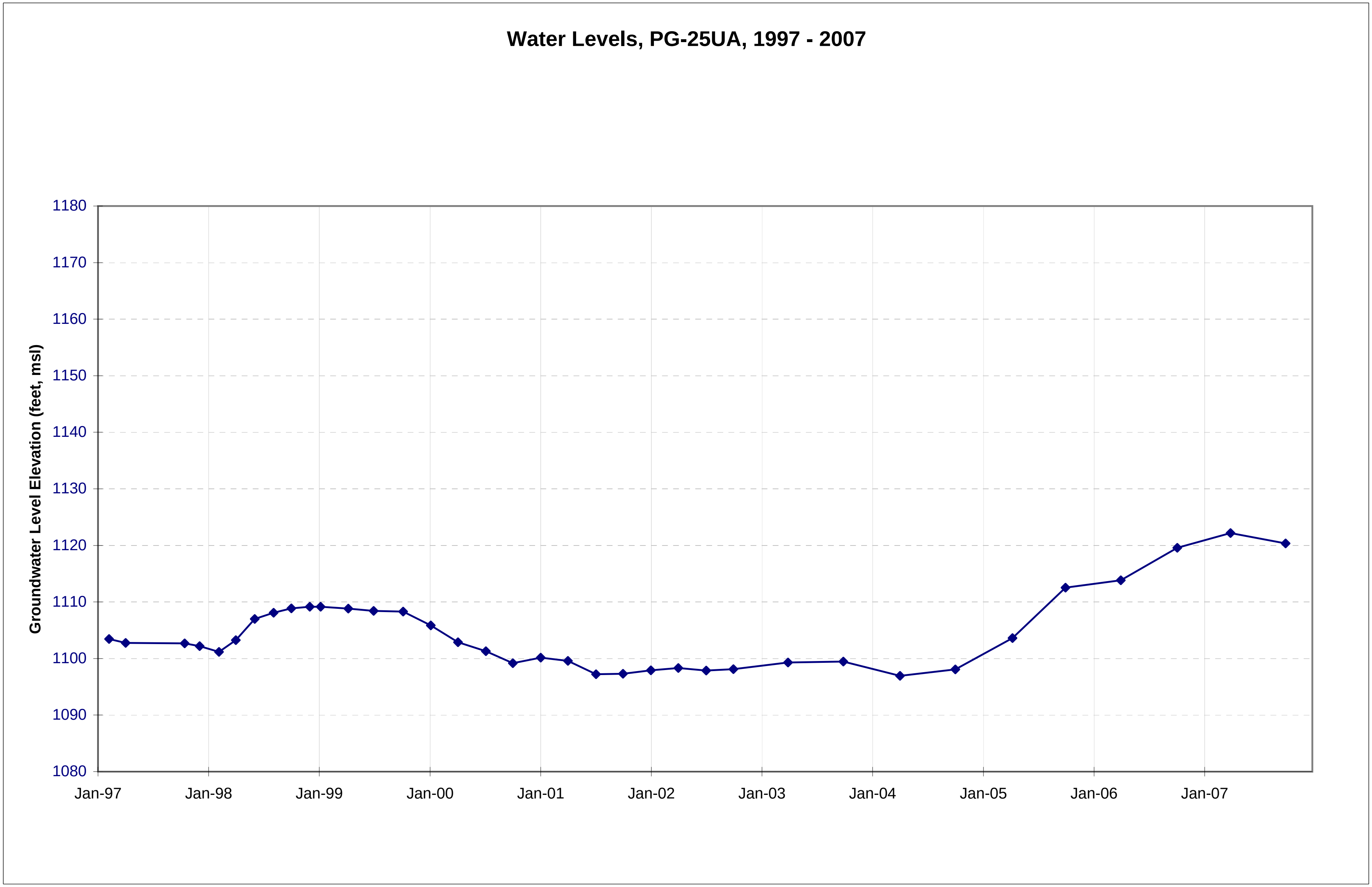
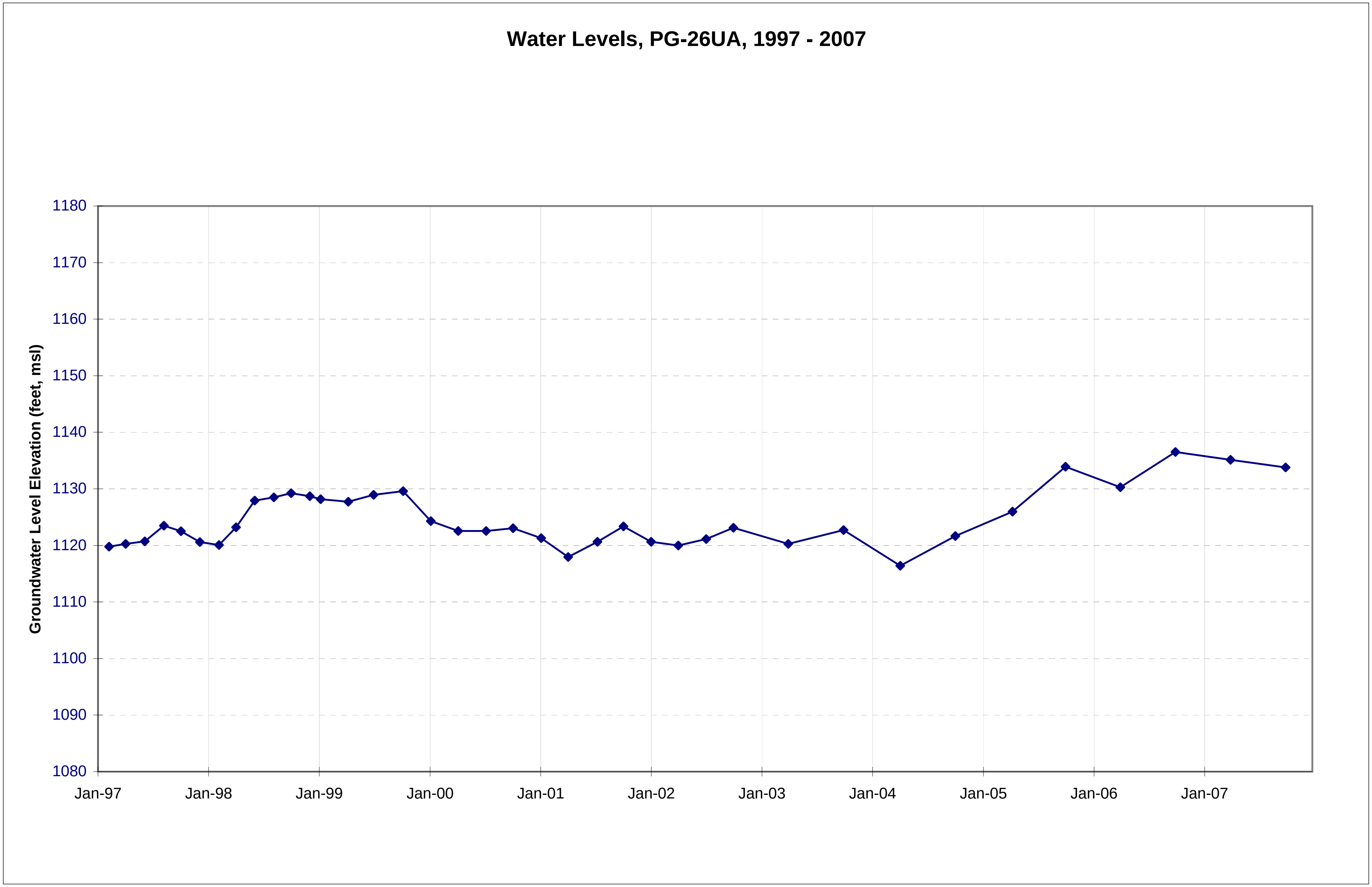
Jan-05
Jan-06
Jan-07

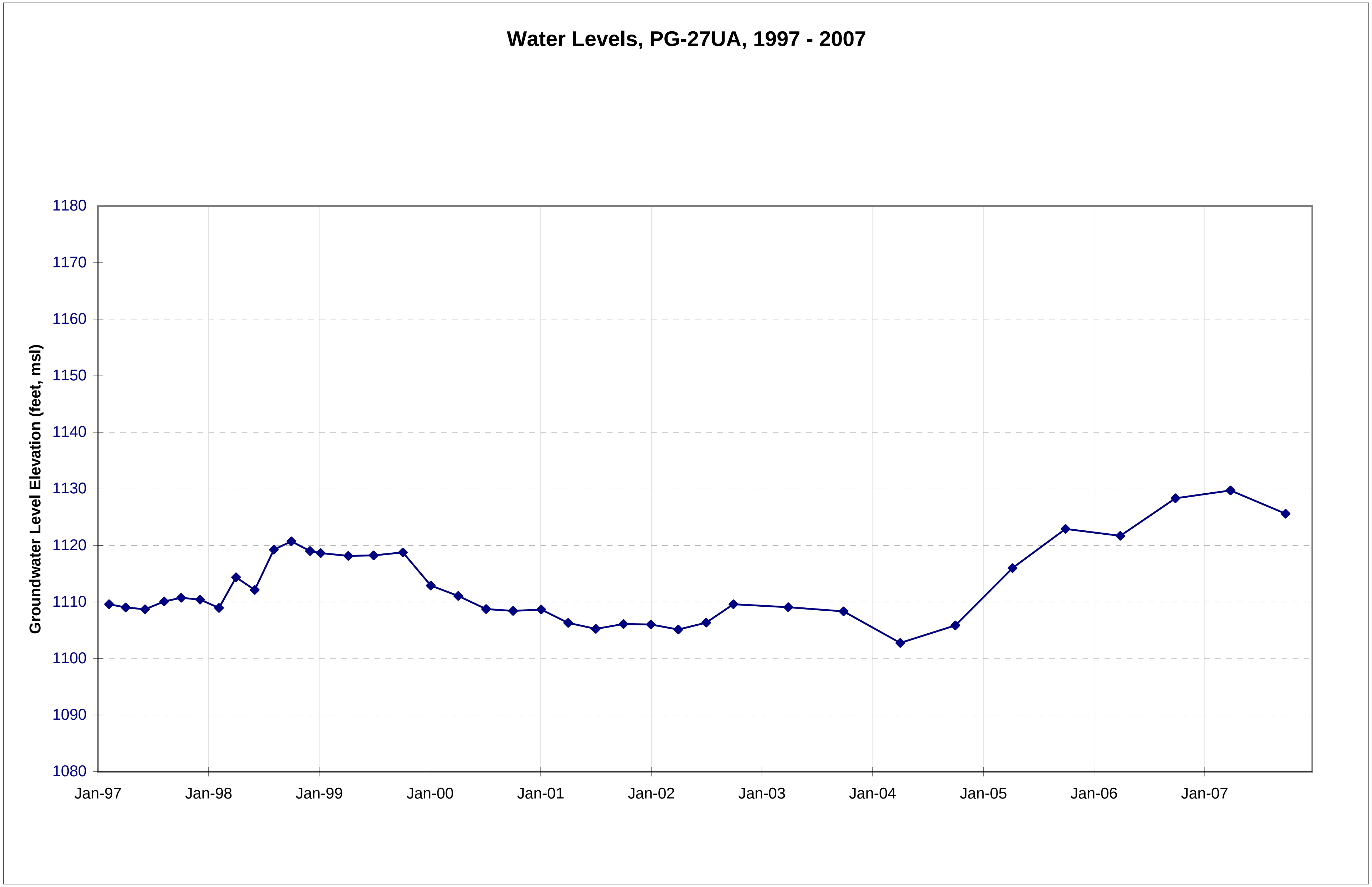


Water Levels, PG-24UA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1180
1170
1160
1150
1140
1130
1120
1110
1100
1090
1080
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

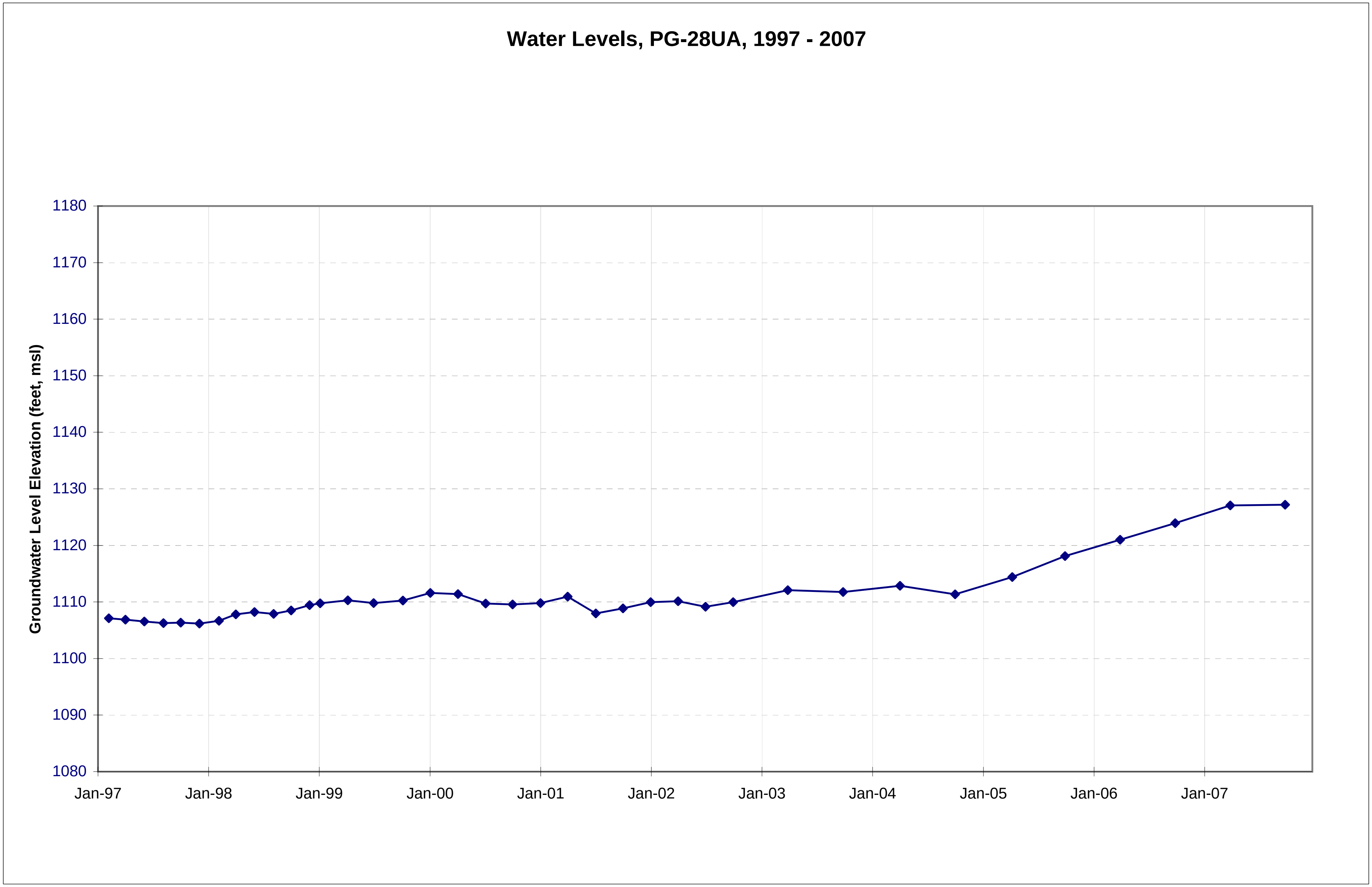

Water Levels, PG-25UA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1180
1170
1160
1150
1140
1130
1120
1110
1100
1090
1080
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07



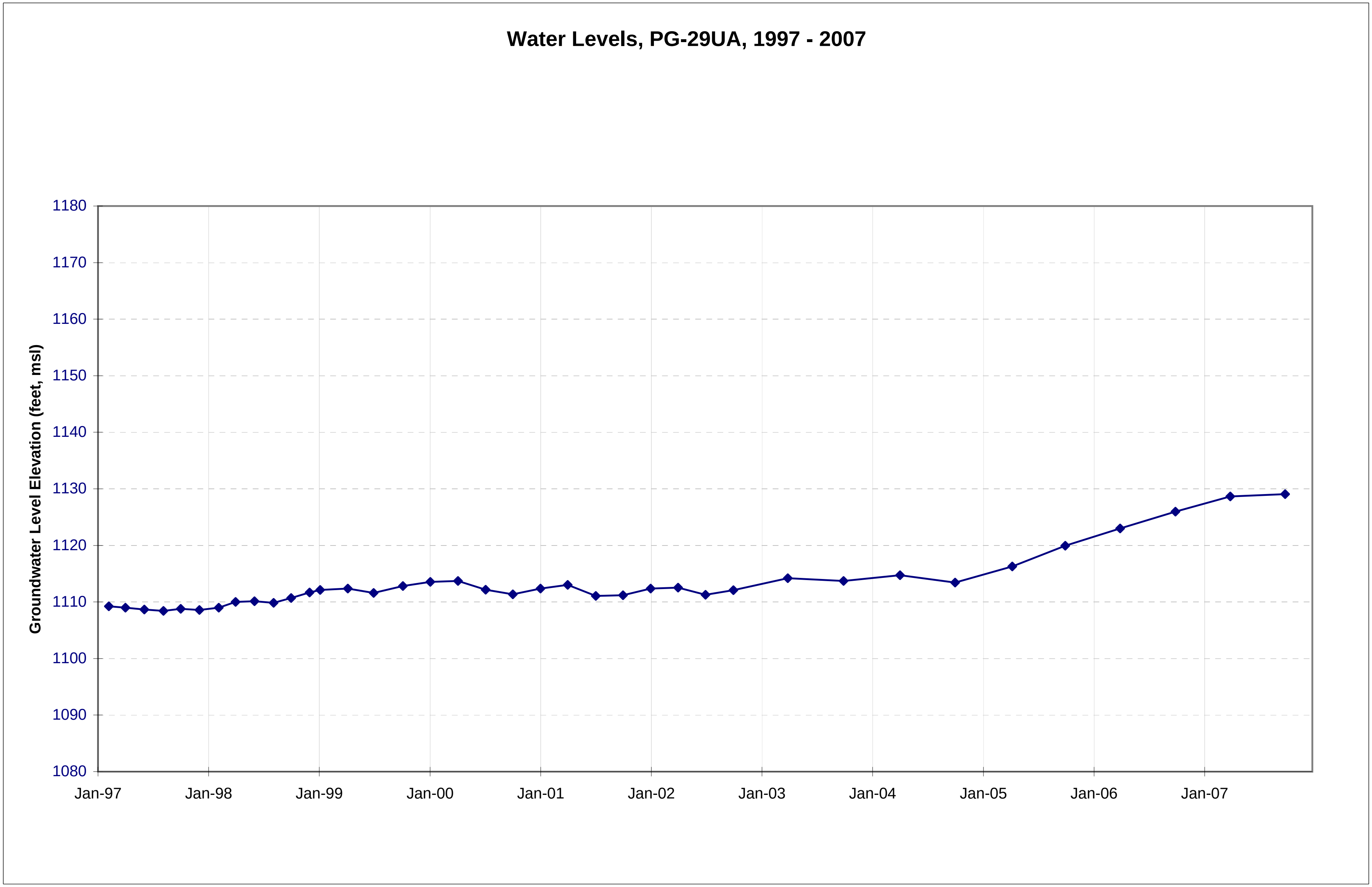
Water Levels, PG-26UA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1180
1170
1160
1150
1140
1130
1120
1110
1100
1090
1080
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

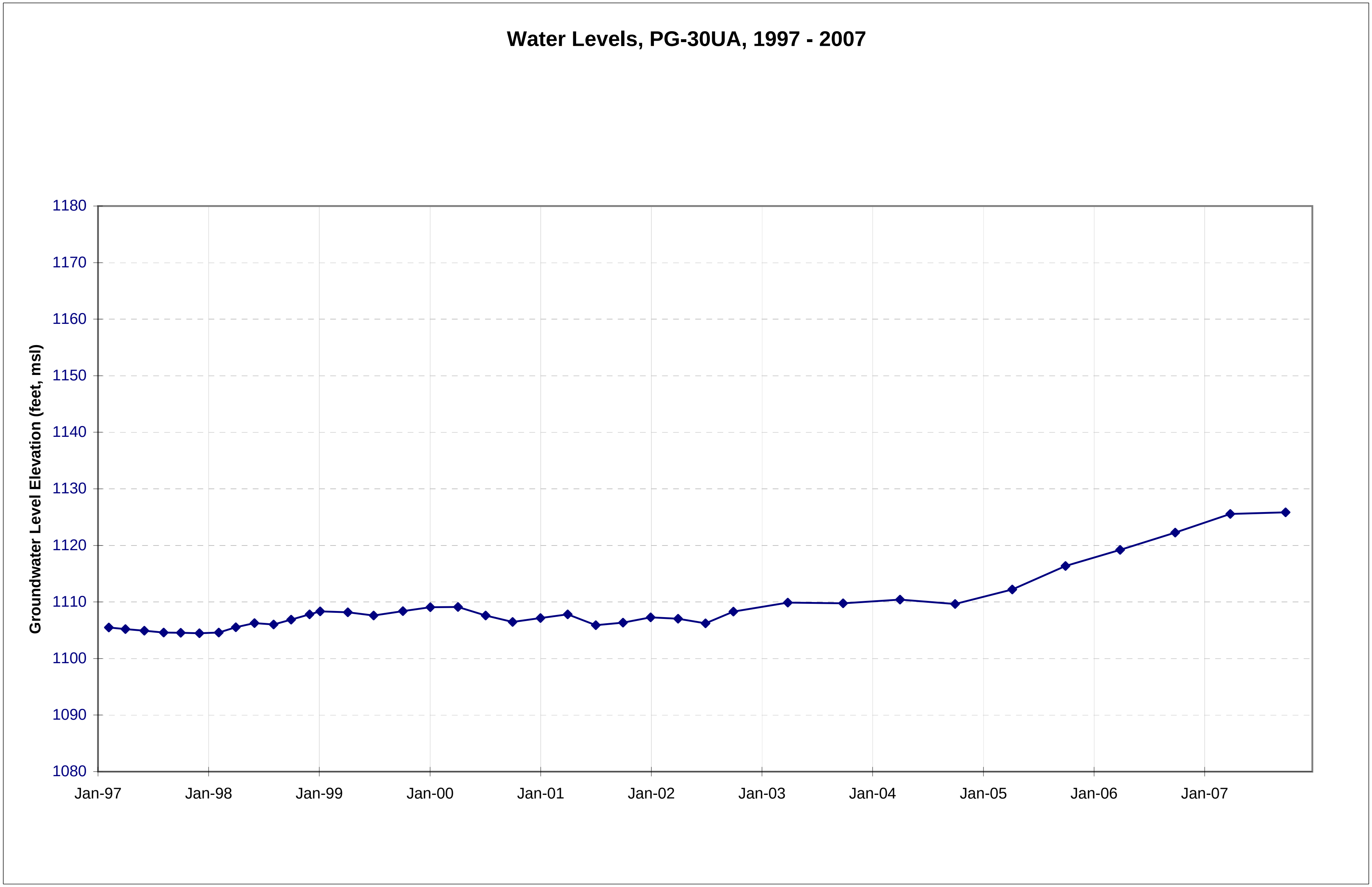


Water Levels, PG-27UA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1180
1170
1160
1150
1140
1130
1120
1110
1100
1090
1080
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

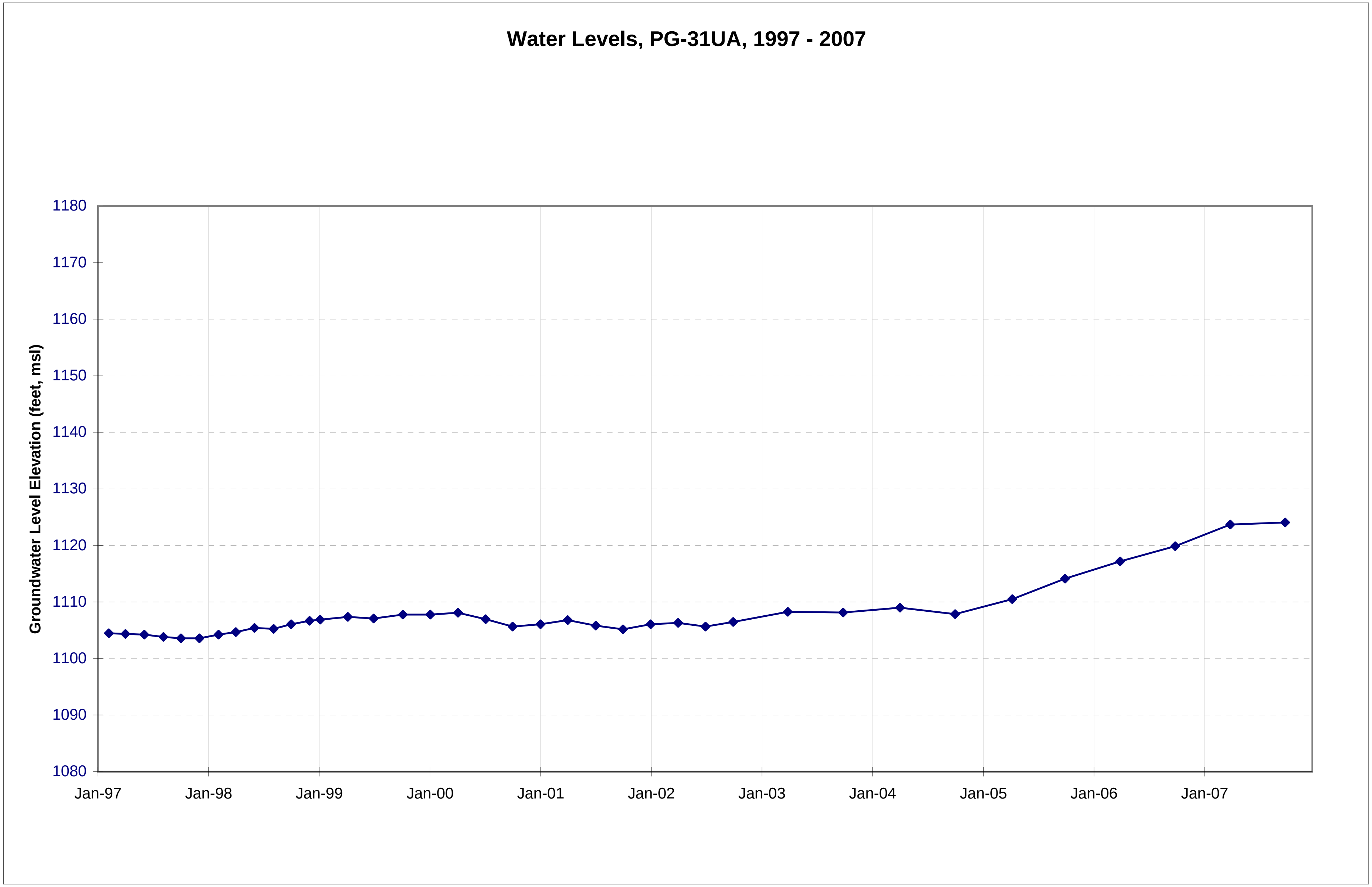


Water Levels, PG-28UA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1180
1170
1160
1150
1140
1130
1120
1110
1100
1090
1080
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

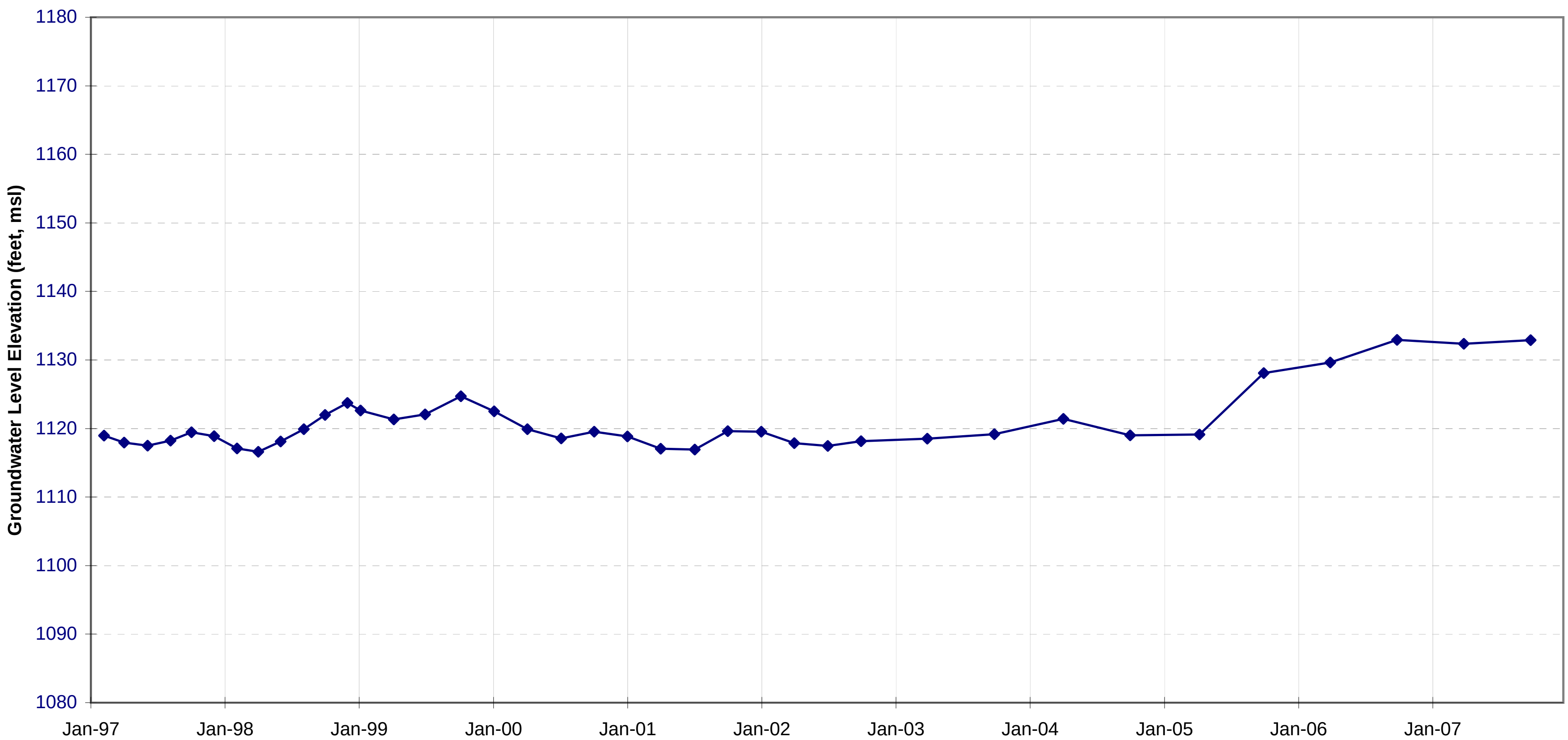

Water Levels, PG-29UA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1180
1170
1160
1150
1140
1130
1120
1110
1100
1090
1080
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

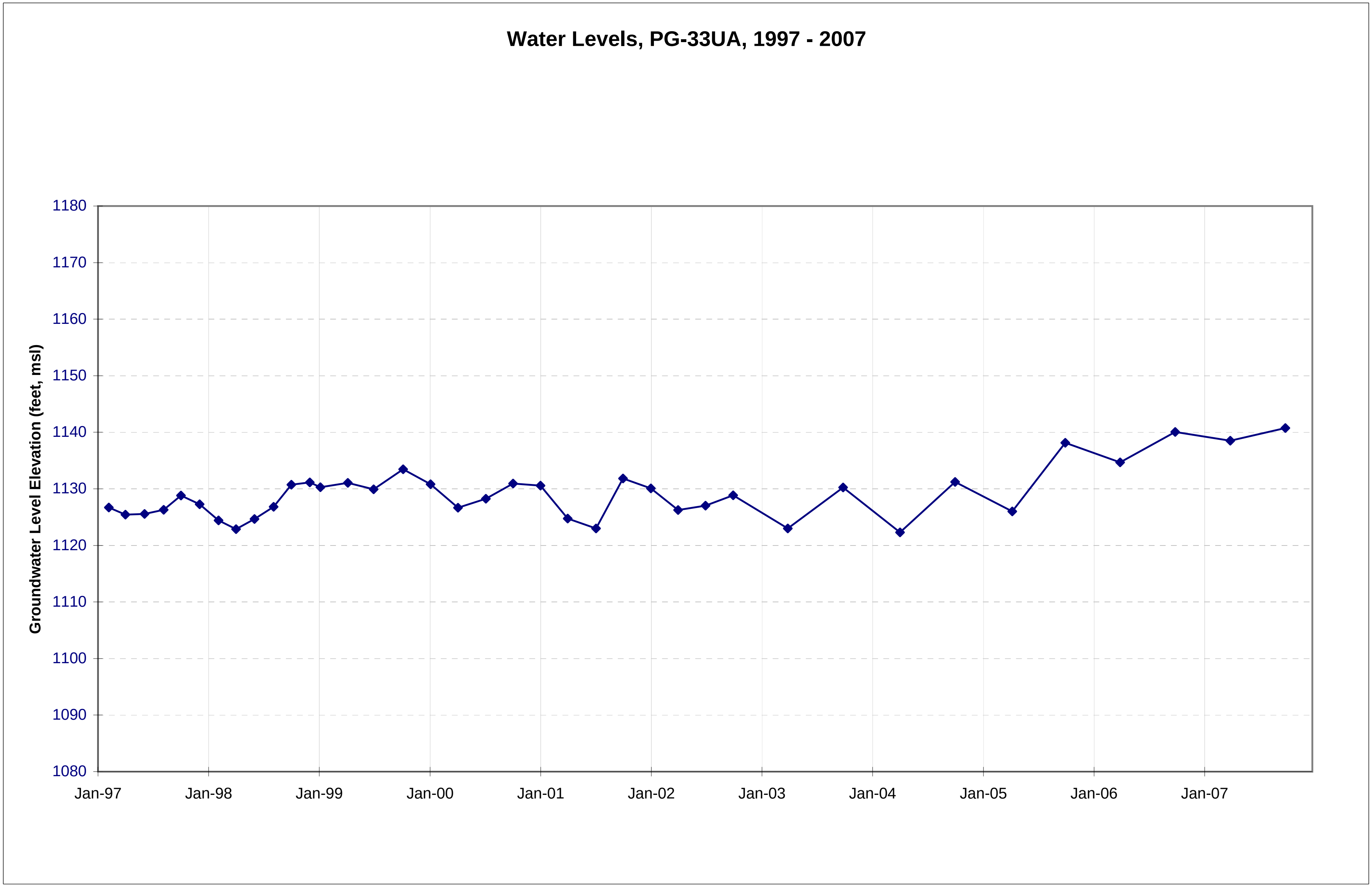


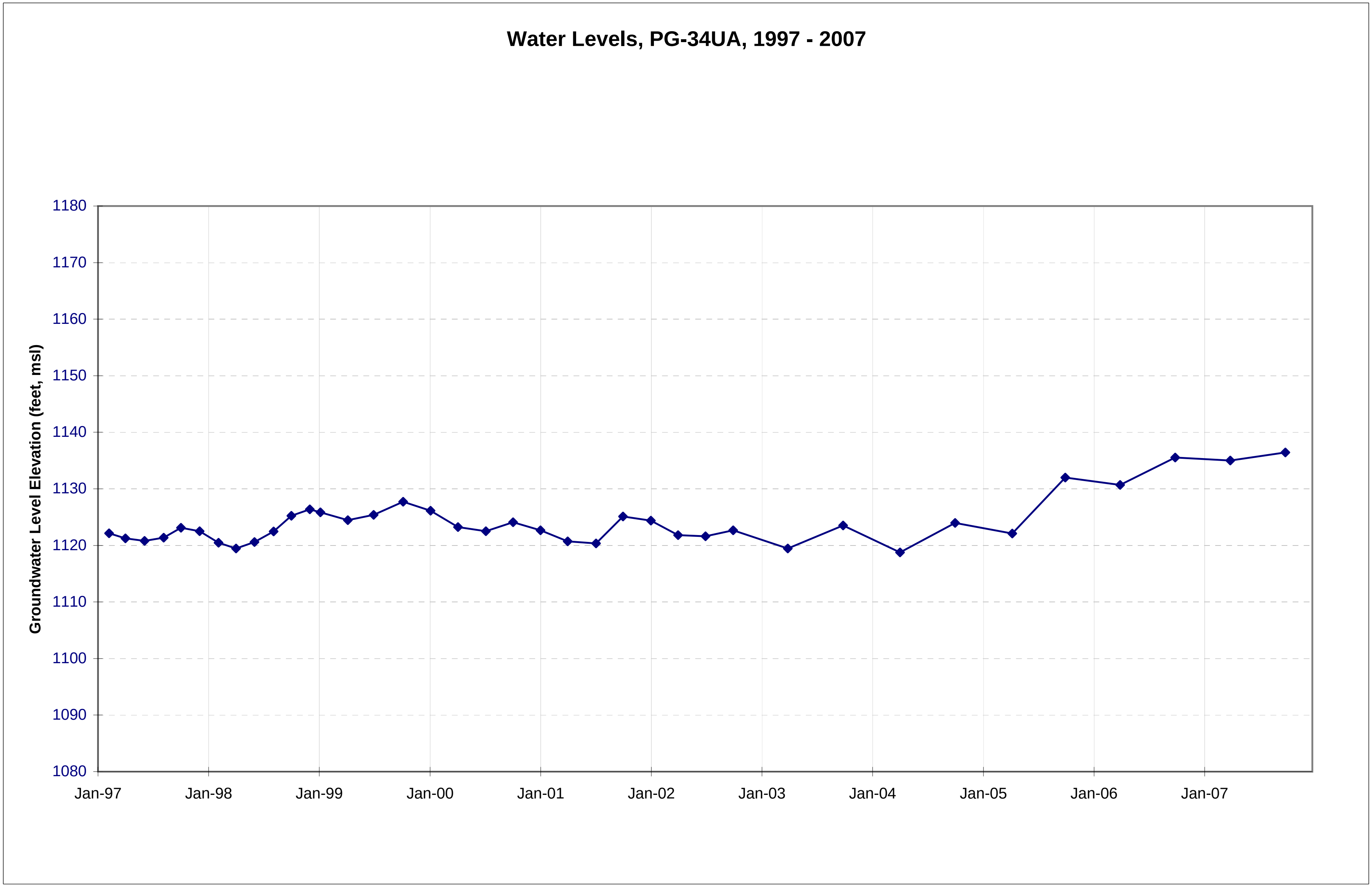
Water Levels, PG-30UA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1180
1170
1160
1150
1140
1130
1120
1110
1100
1090
1080
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

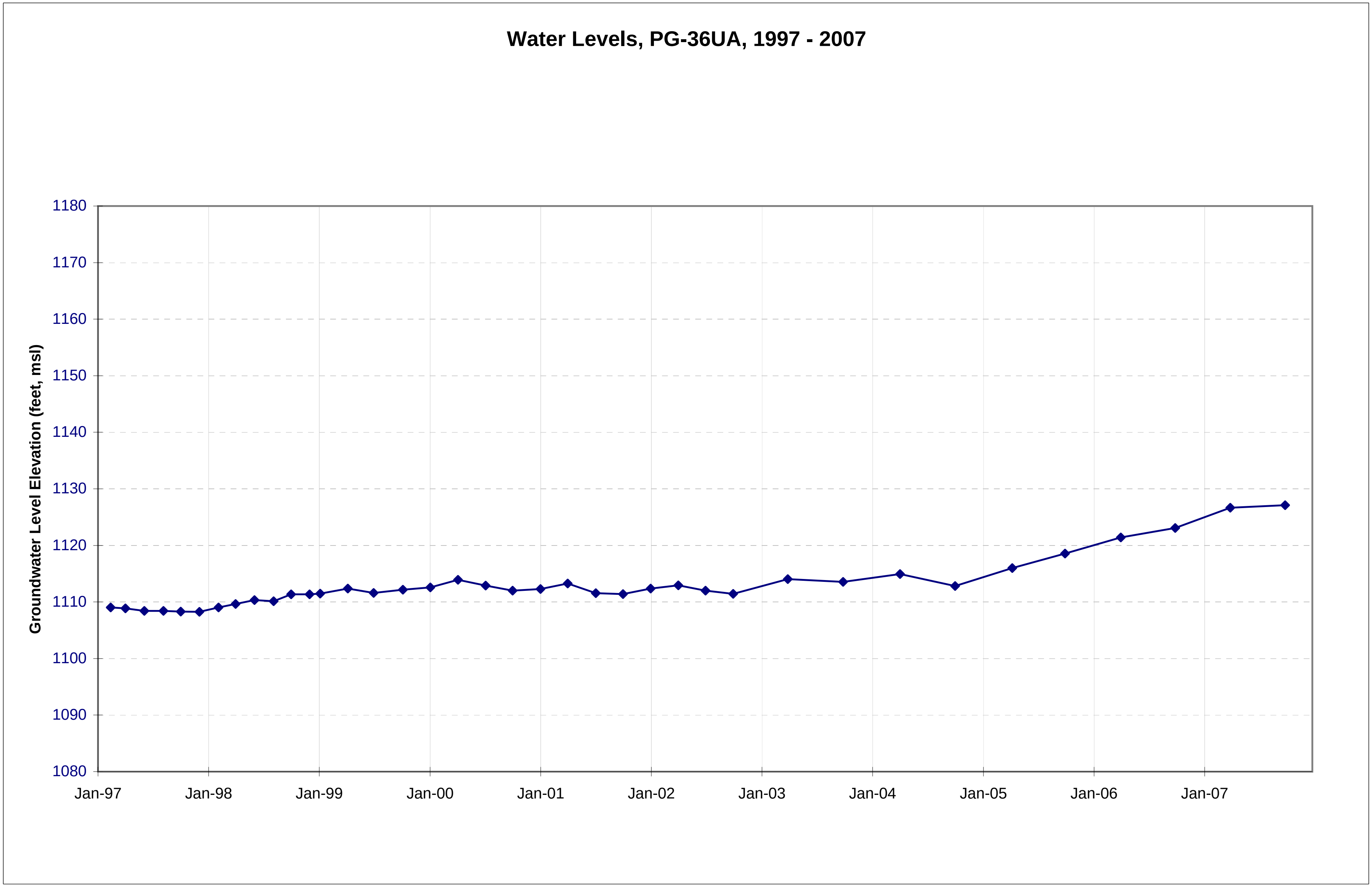

Water Levels, PG-31UA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1180
1170
1160
1150
1140
1130
1120
1110
1100
1090
1080
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

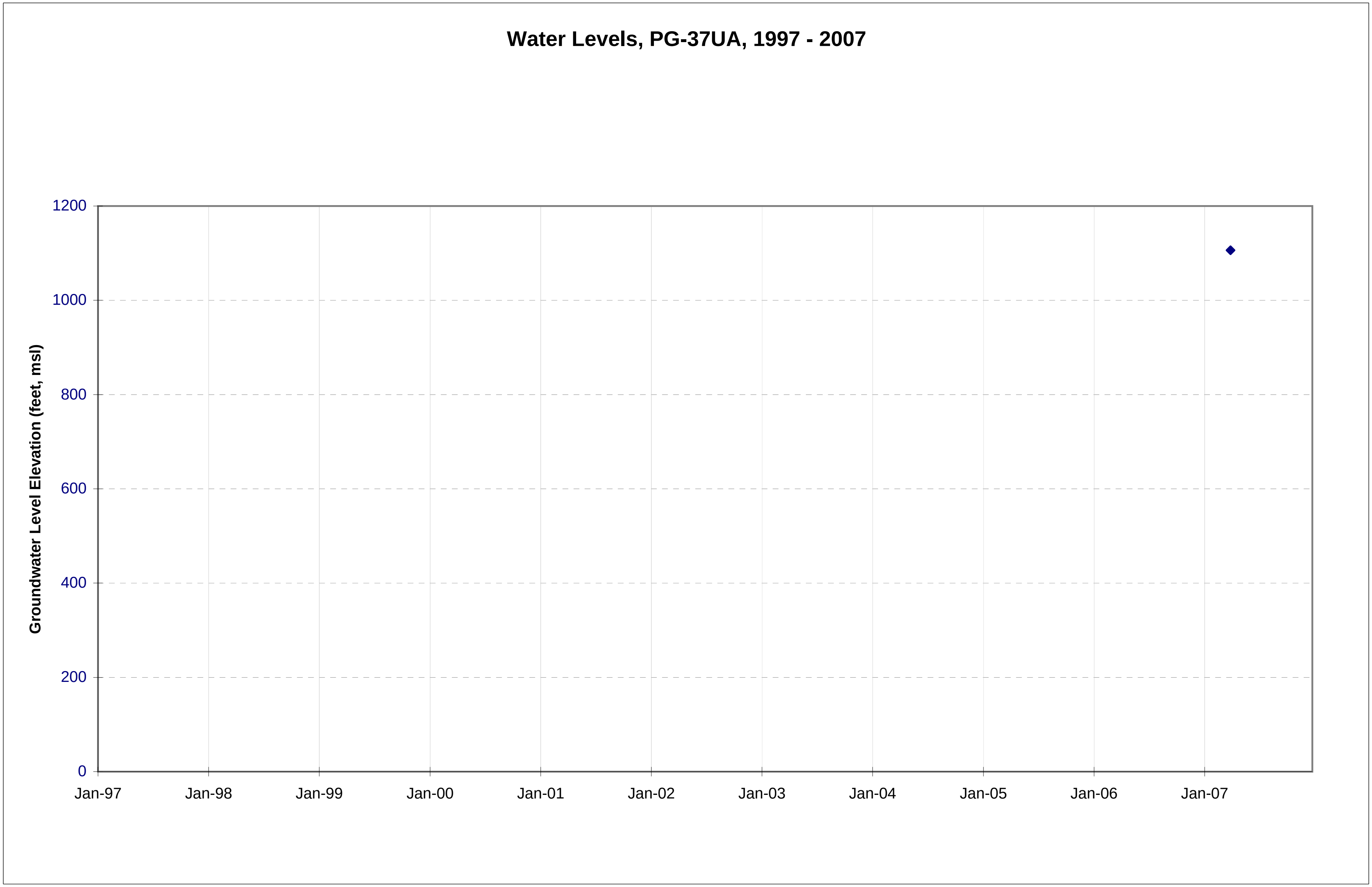
Water Levels, PG-32UA, 1997 - 2007

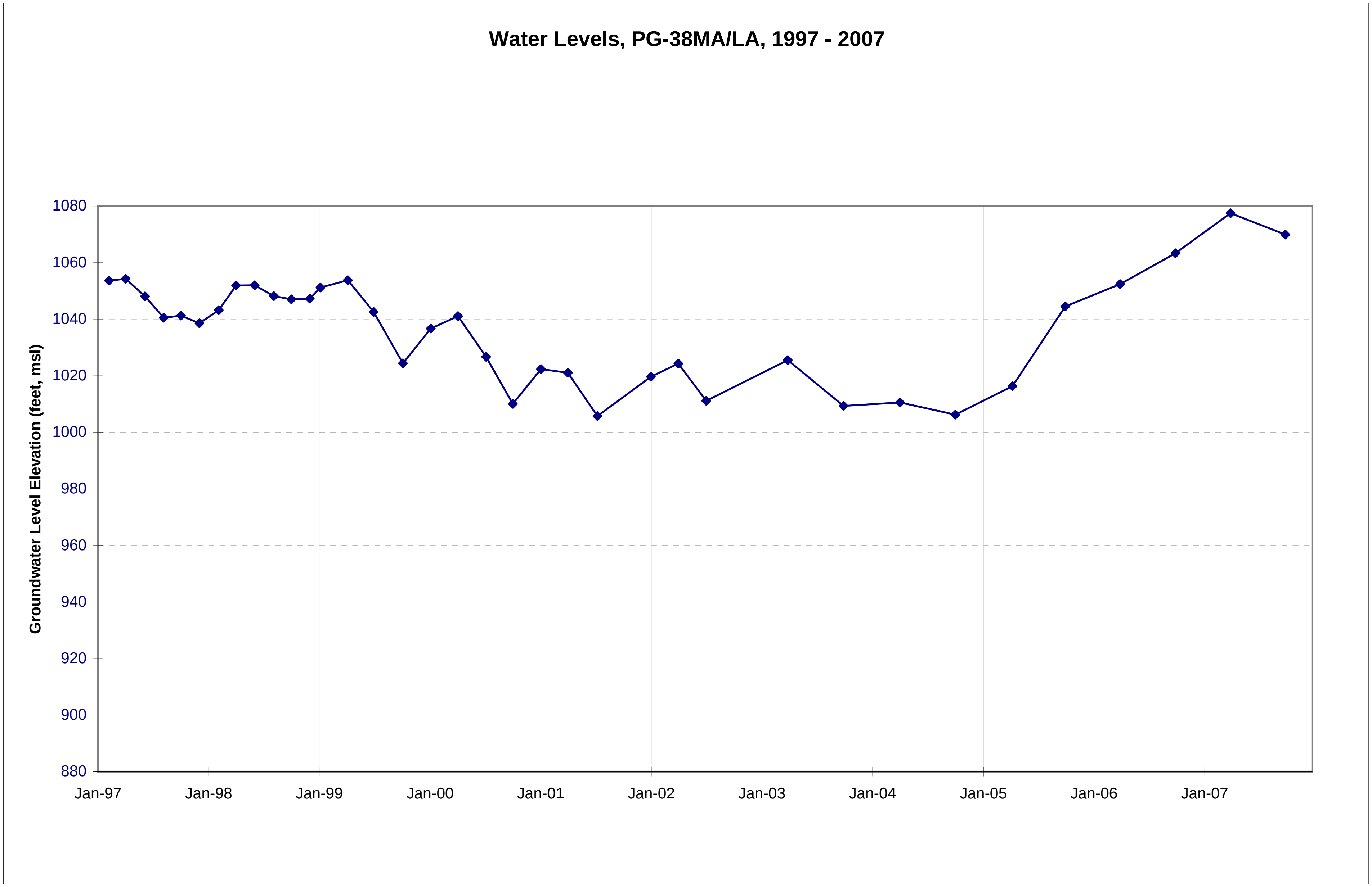


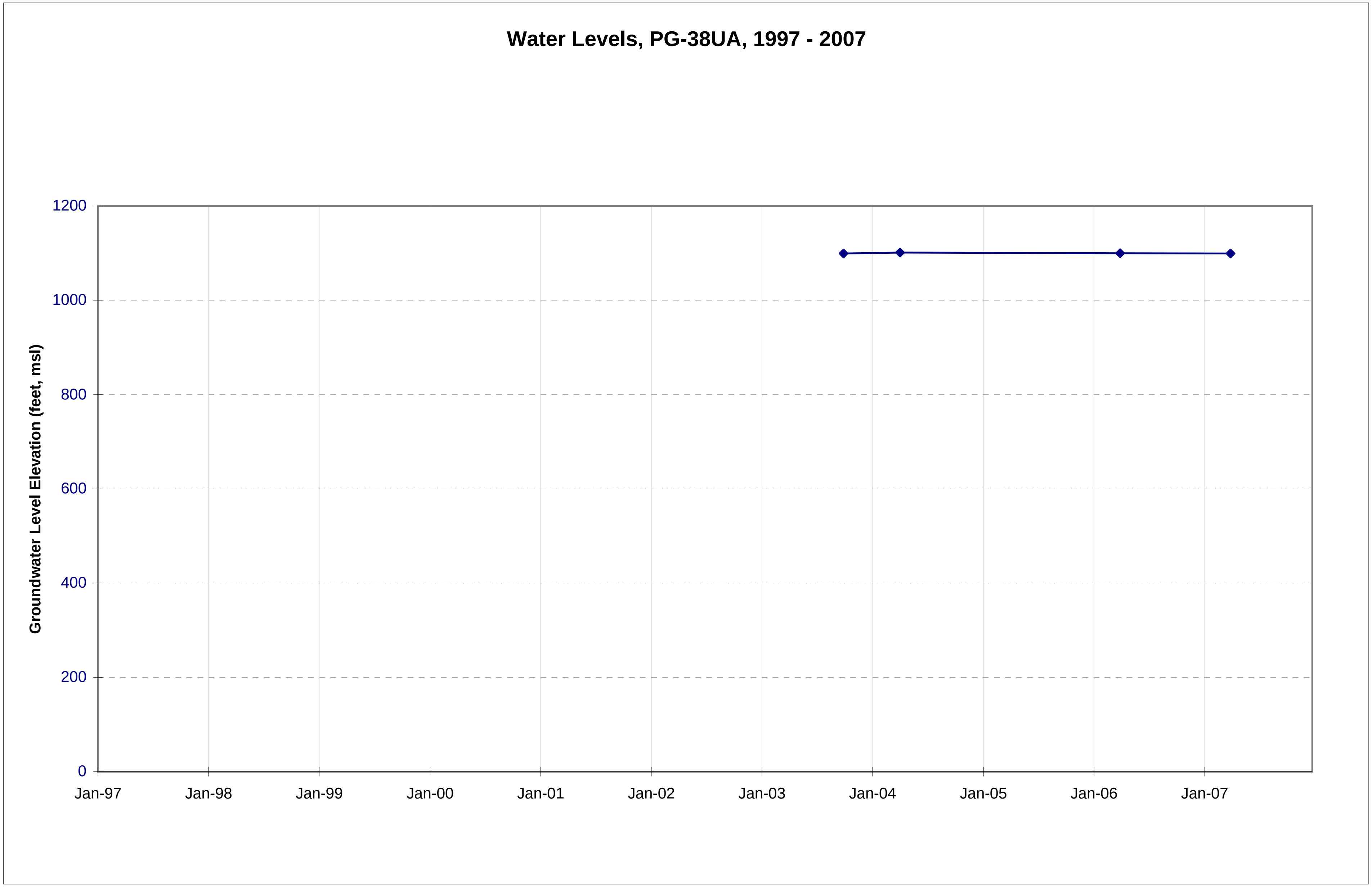

Water Levels, PG-33UA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1180
1170
1160
1150
1140
1130
1120
1110
1100
1090
1080
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

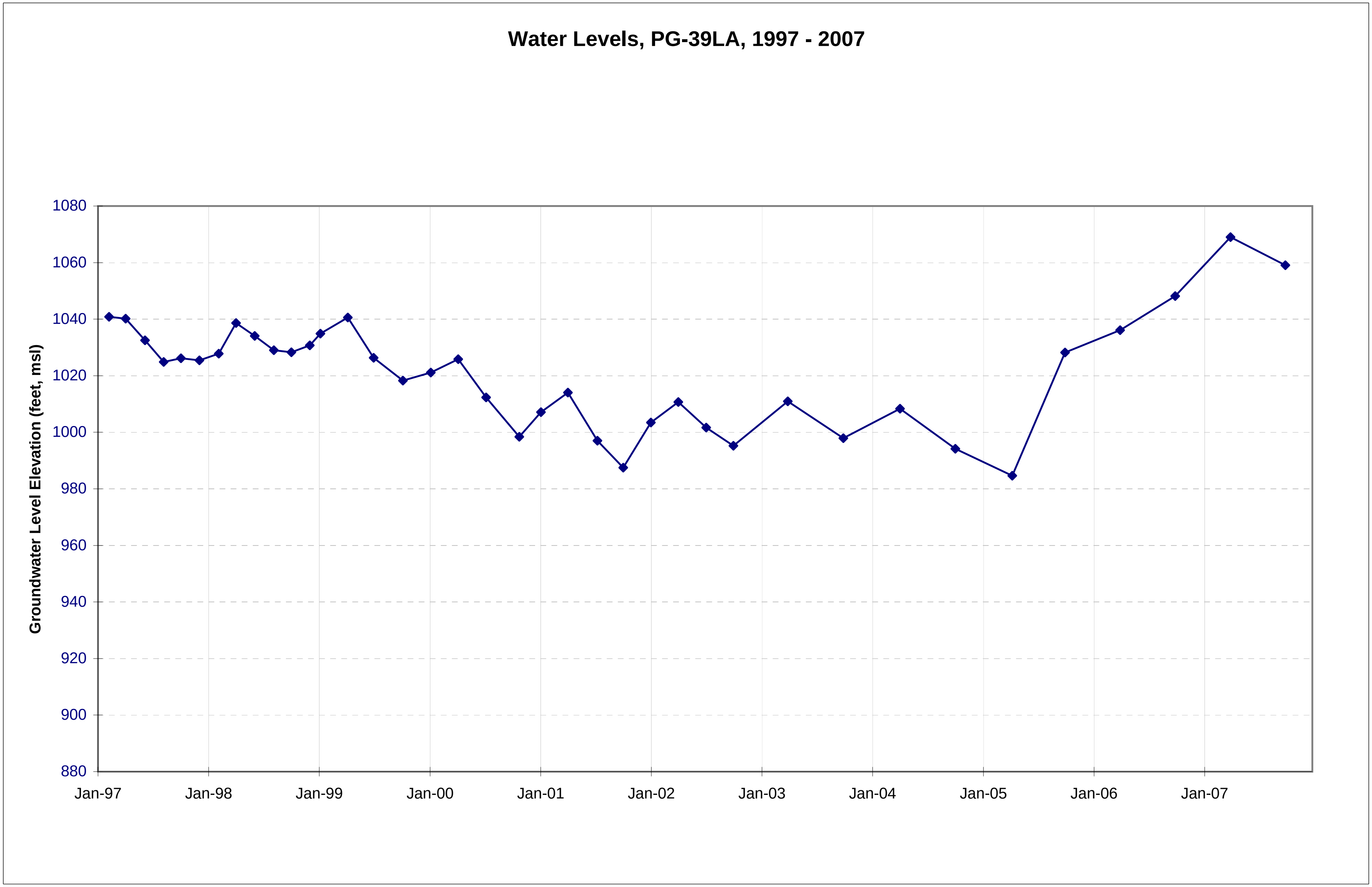

Water Levels, PG-34UA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1180
1170
1160
1150
1140
1130
1120
1110
1100
1090
1080
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

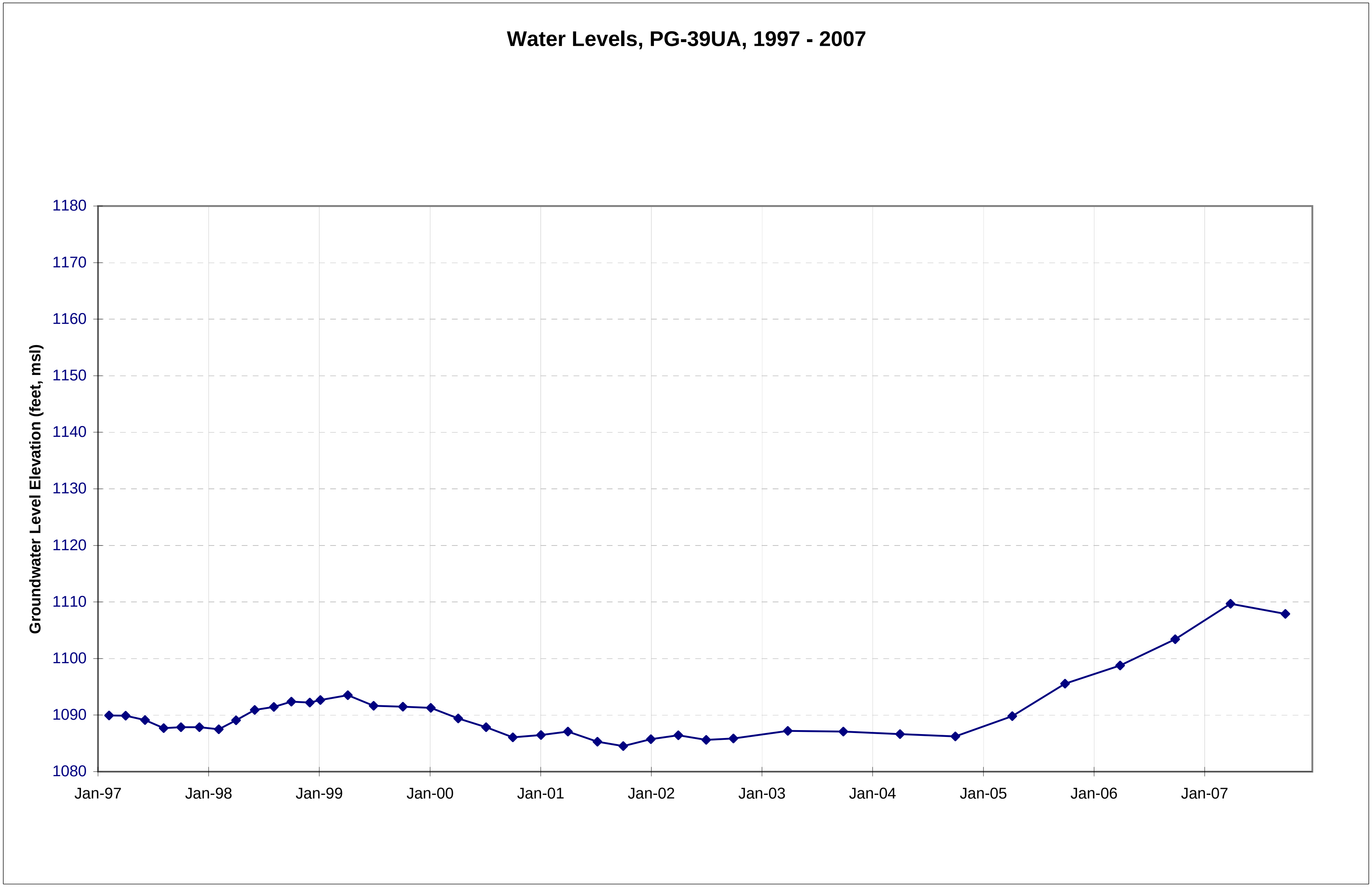

Water Levels, PG-36UA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1180
1170
1160
1150
1140
1130
1120
1110
1100
1090
1080
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

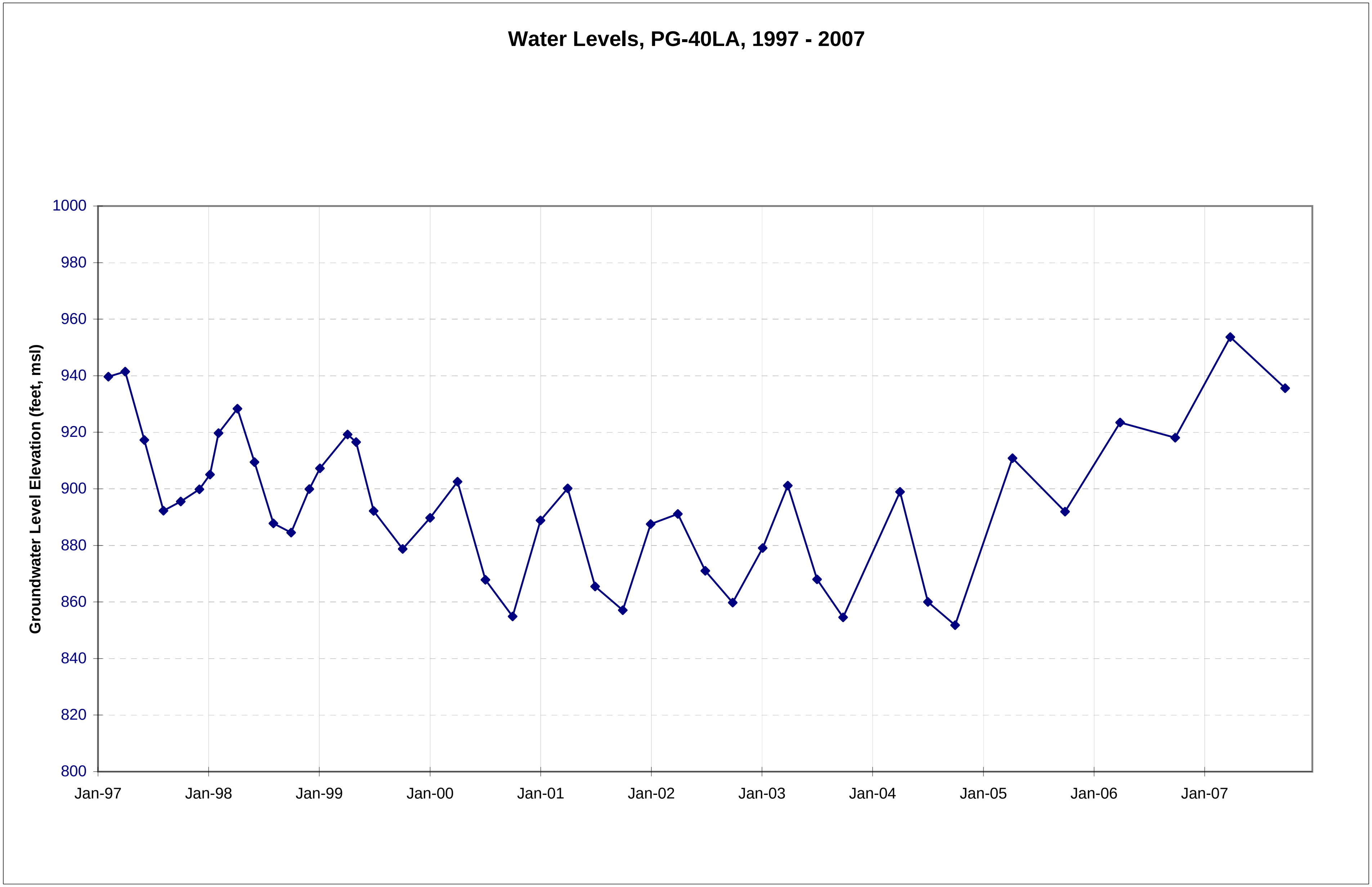

Water Levels, PG-37UA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
0
200
400
600
800
1000
1200
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07


Water Levels, PG-38MA/LA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1080
1060
1040
1020
1000
980
960
940
920
900
880
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

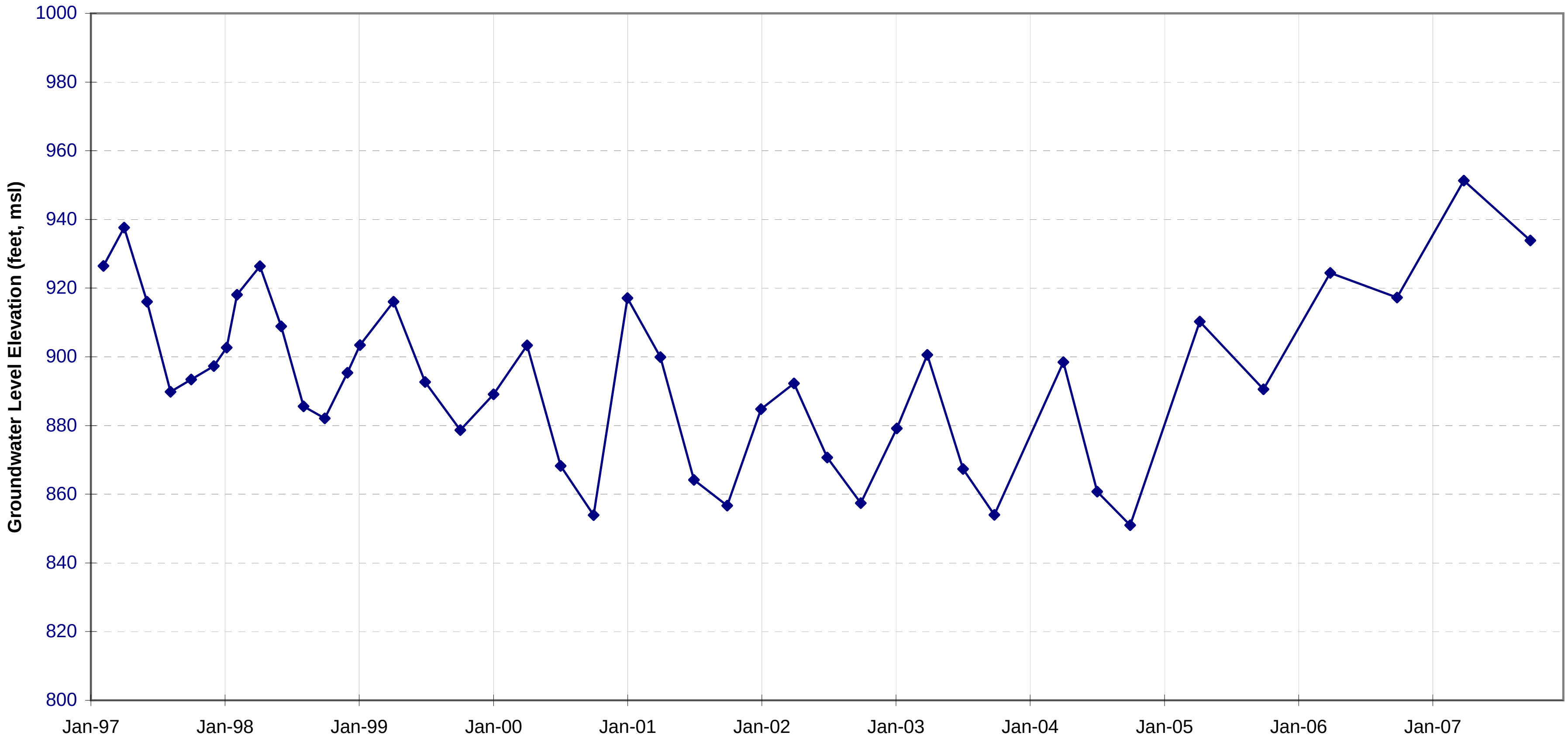

Water Levels, PG-38UA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1200
1000
800
600
400
200
0
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

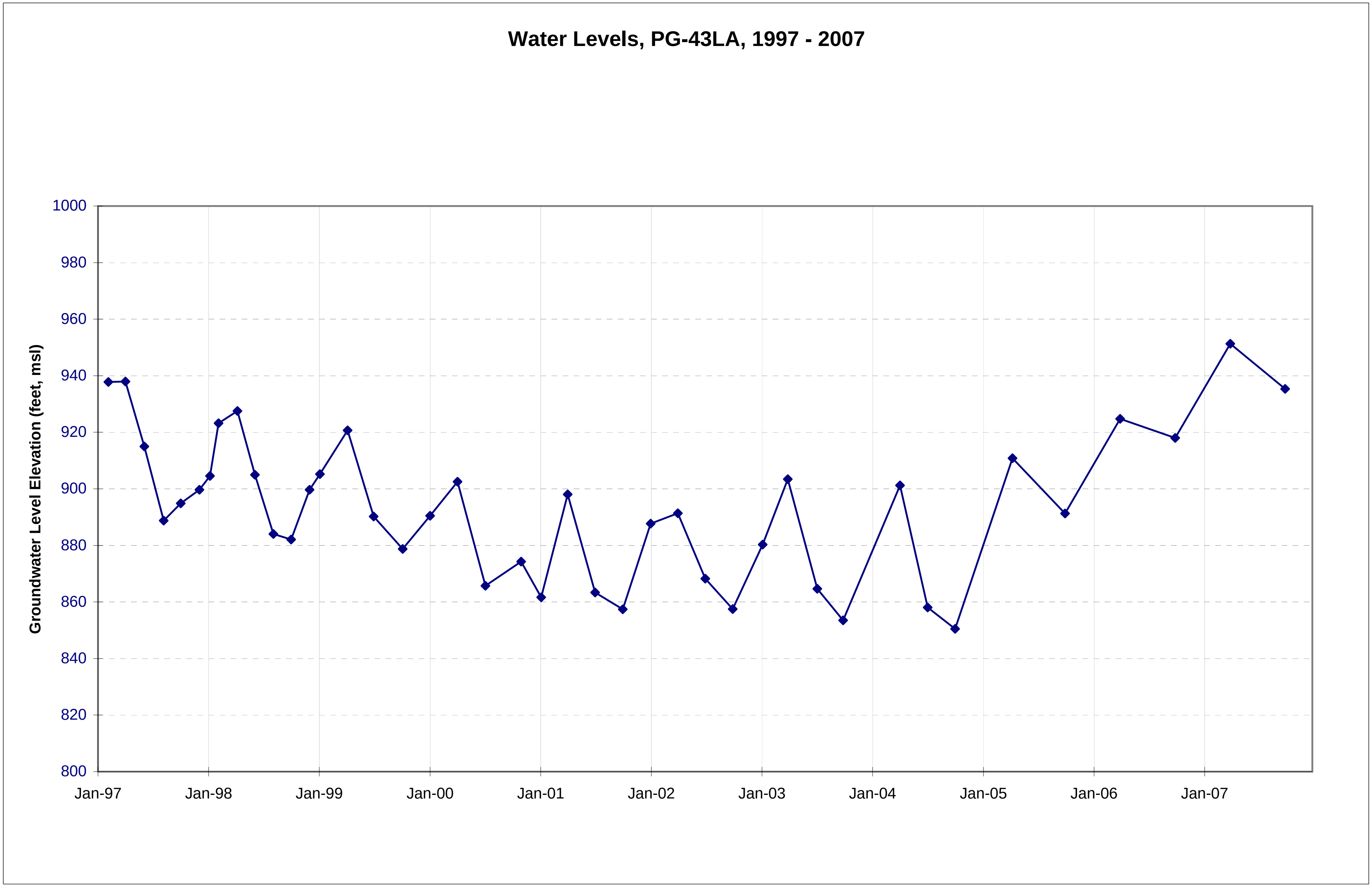

Water Levels, PG-39LA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1080
1060
1040
1020
1000
980
960
940
920
900
880
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07


Water Levels, PG-39UA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1180
1170
1160
1150
1140
1130
1120
1110
1100
1090
1080
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

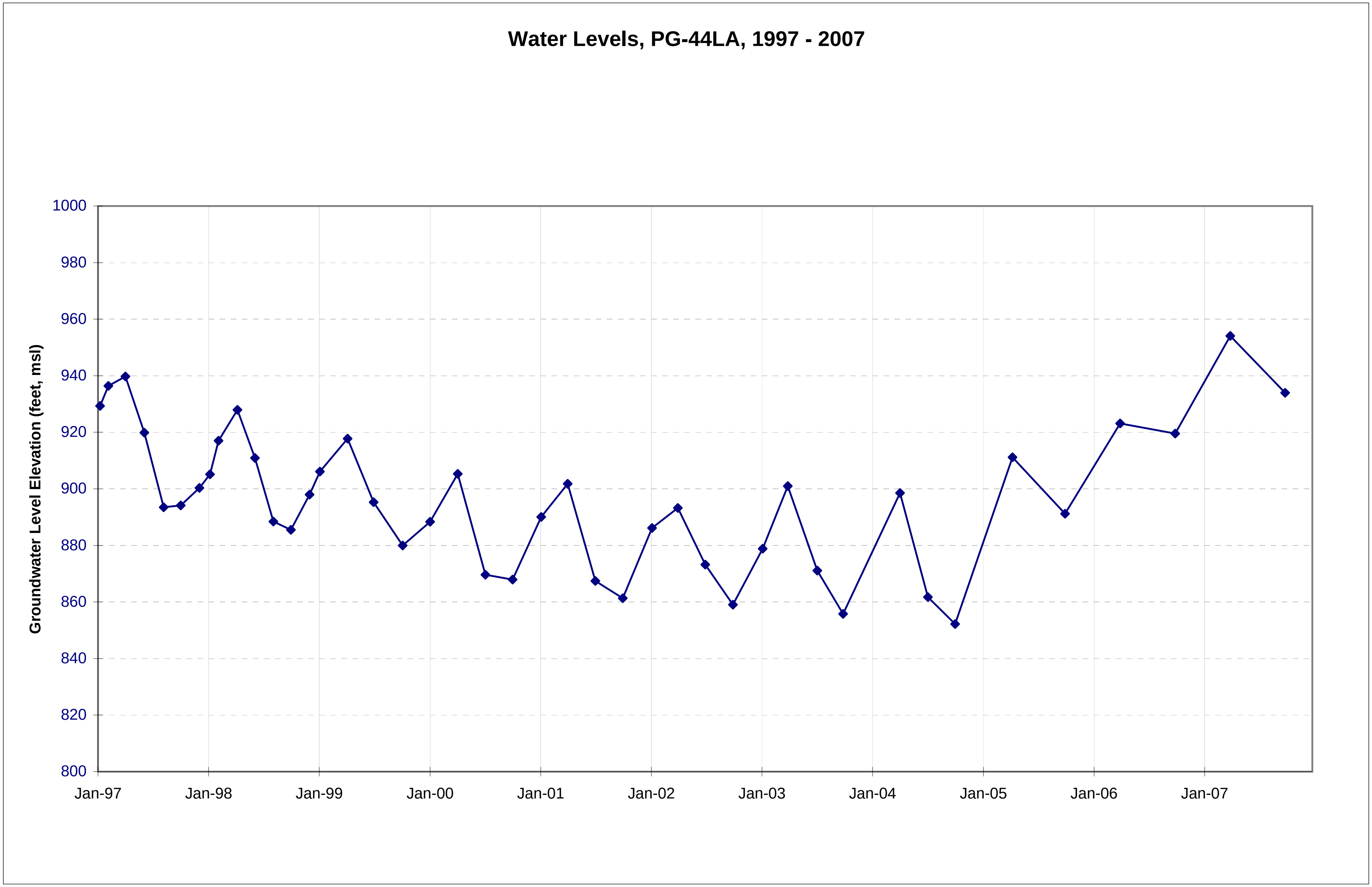

Water Levels, PG-40LA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1000
980
960
940
920
900
880
860
840
820
800
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

Water Levels, PG-42LA, 1997 - 2007





Water Levels, PG-43LA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1000
980
960
940
920
900
880
860
840
820
800
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07


Water Levels, PG-44LA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1000
980
960
940
920
900
880
860
840
820
800
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
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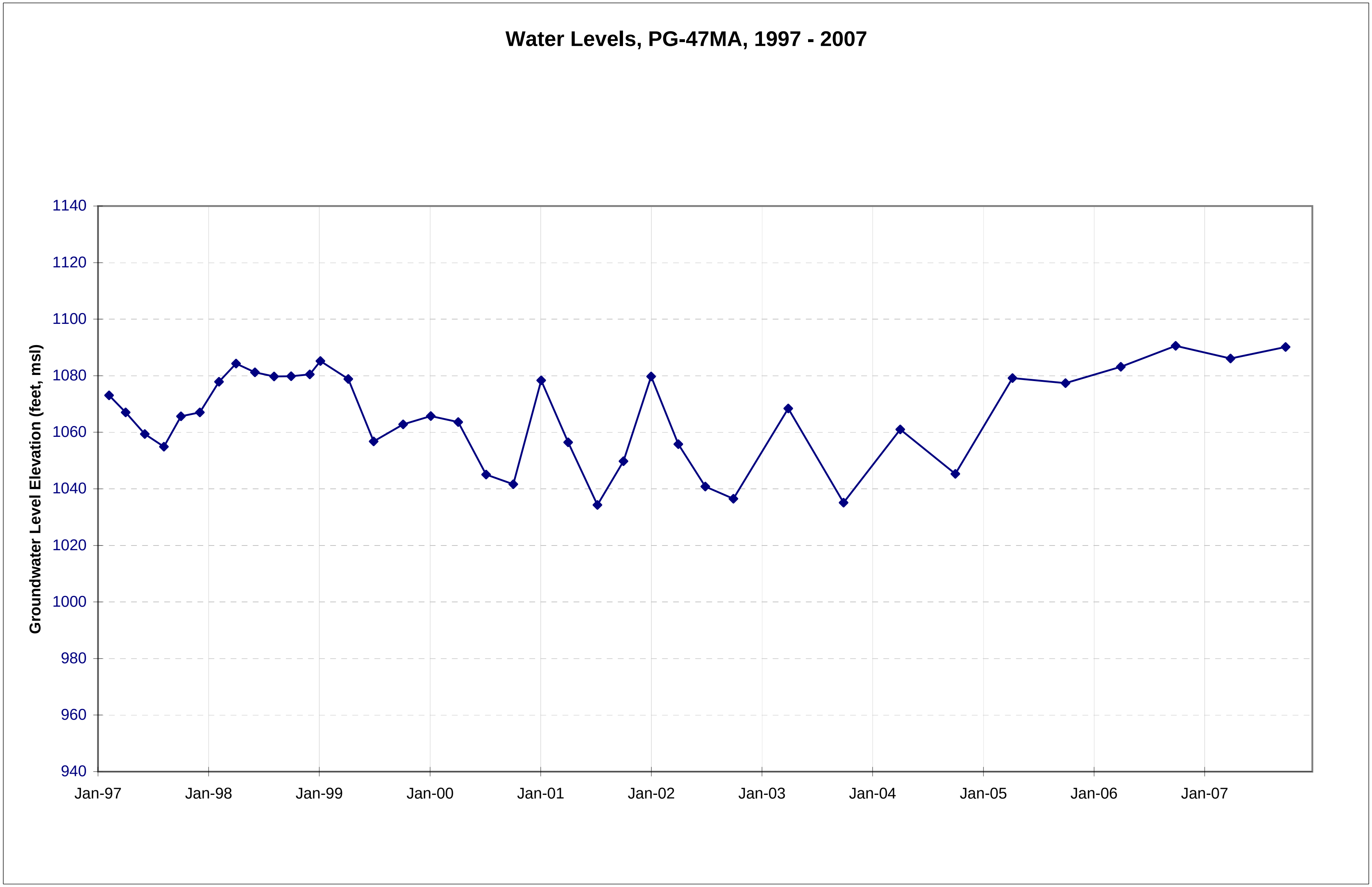
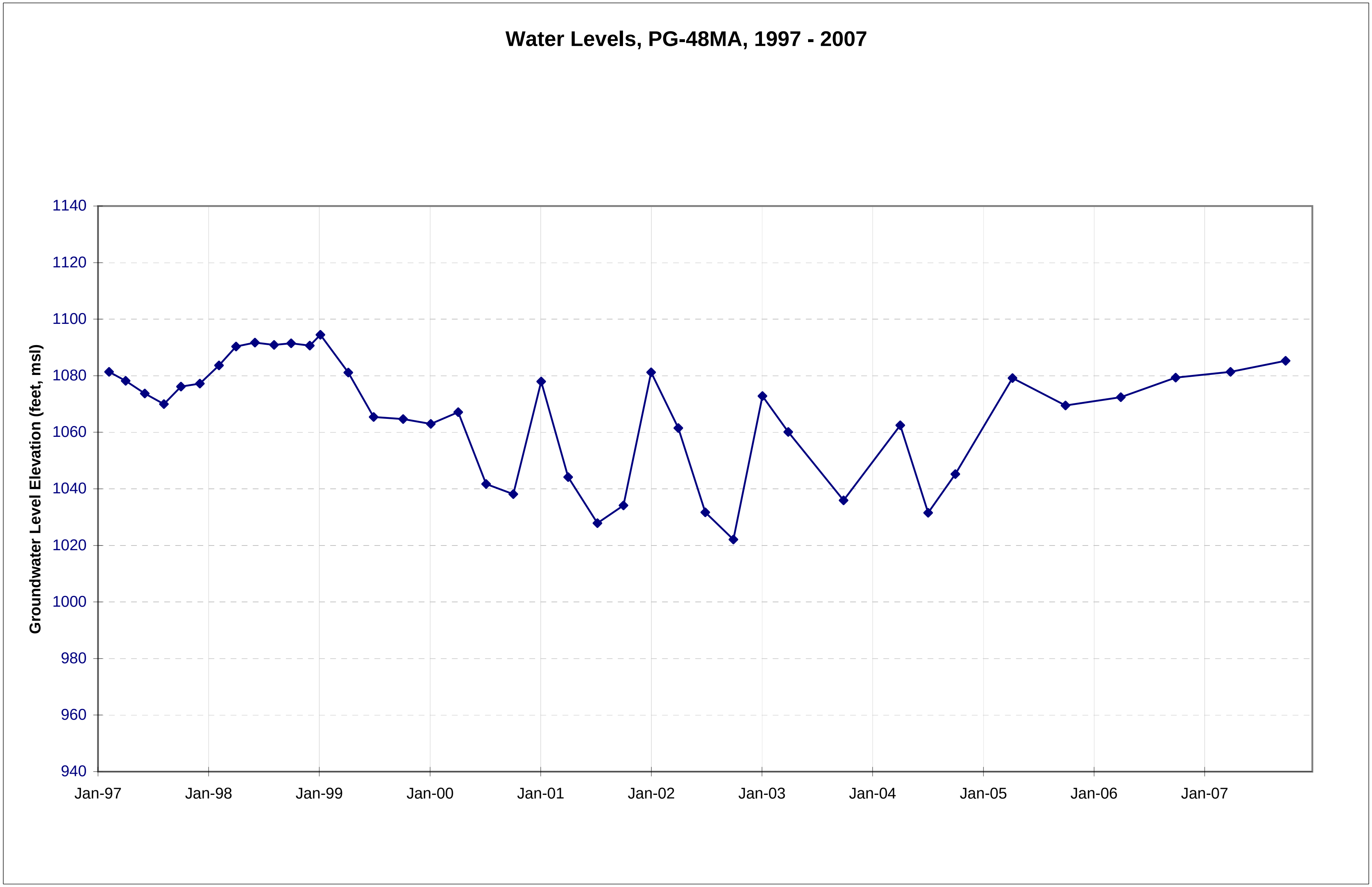
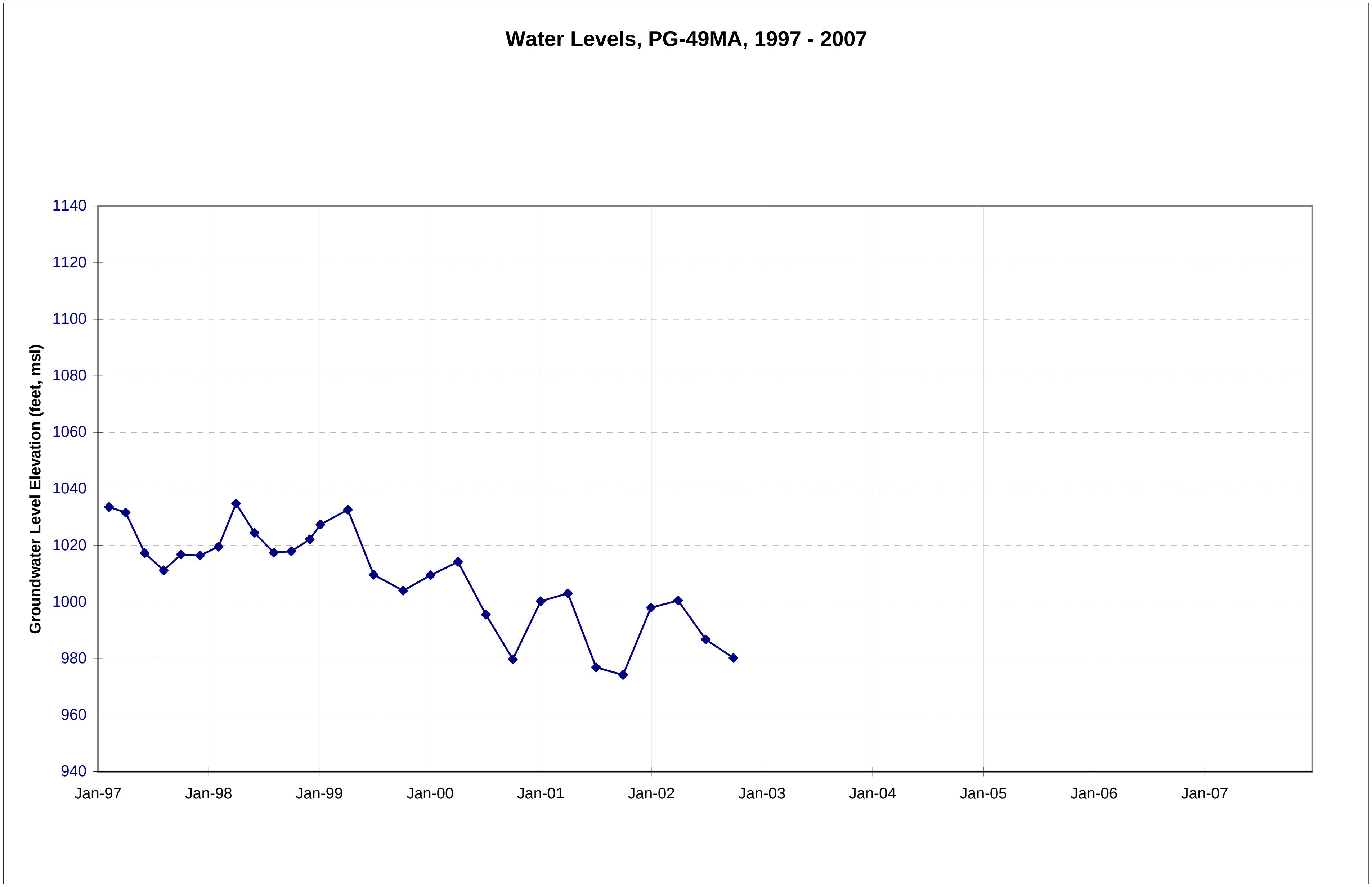
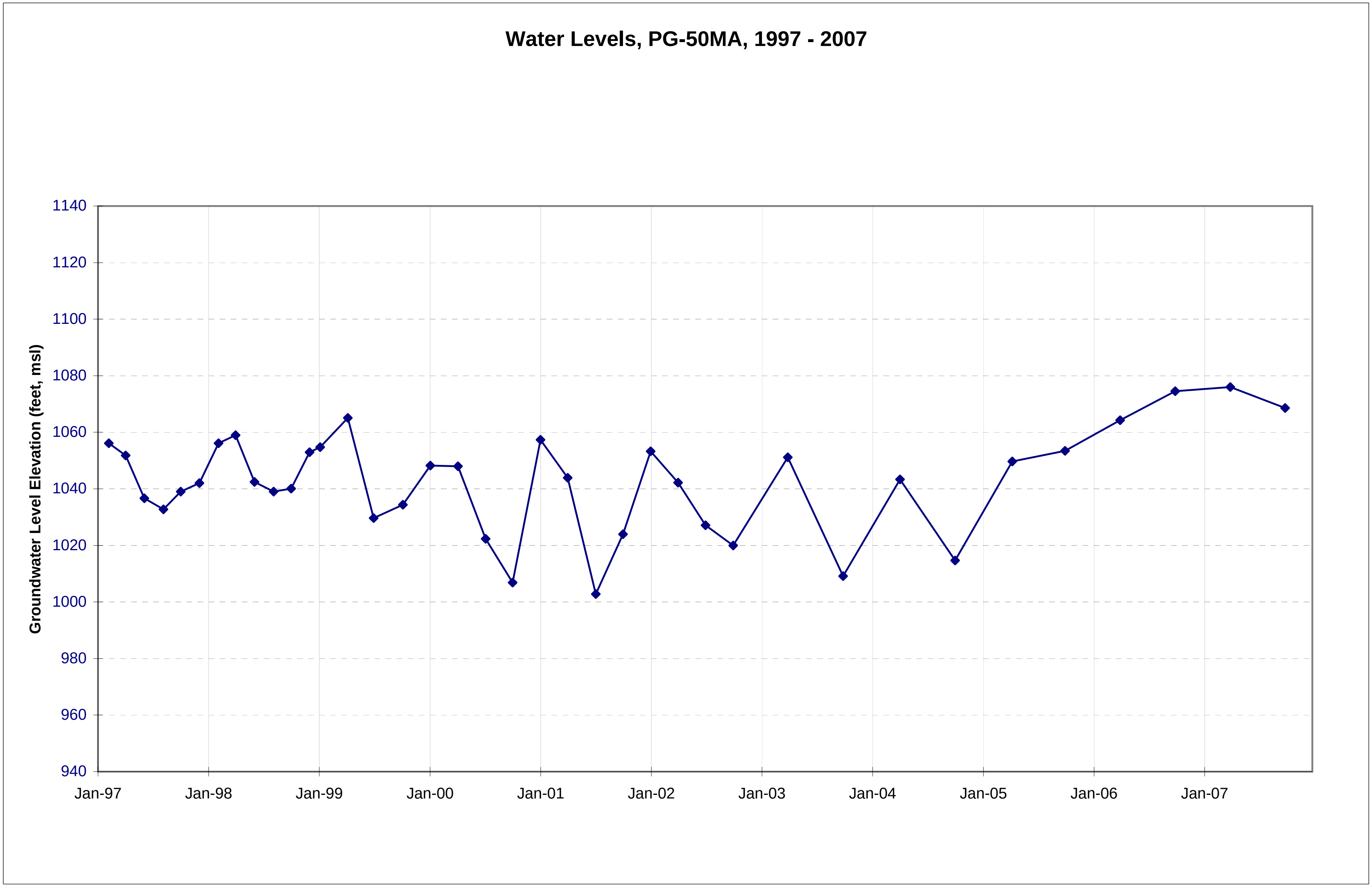
Jan-05
Jan-06
Jan-07

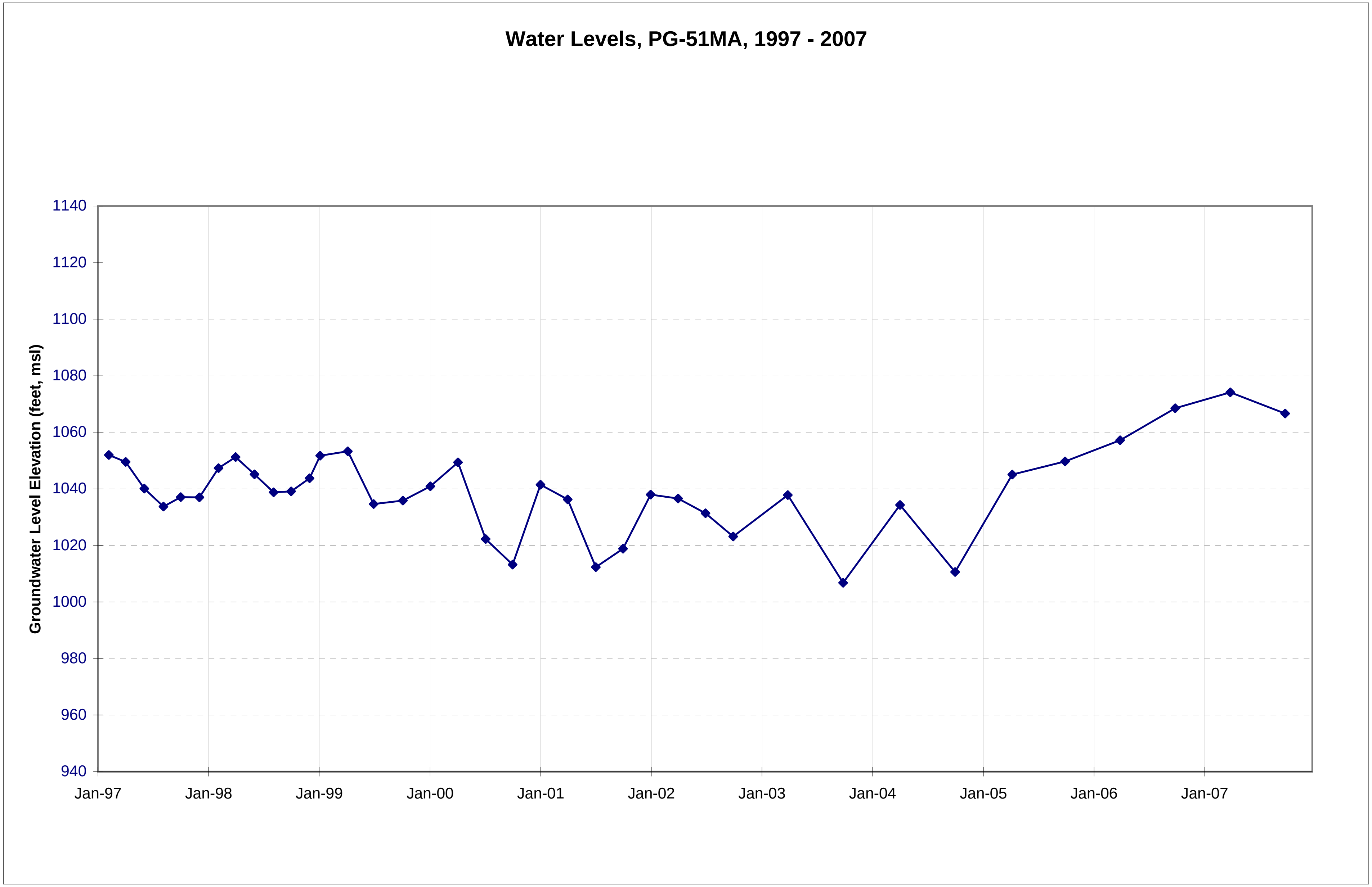


Water Levels, PG-47MA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1140
1120
1100
1080
1060
1040
1020
1000
980
960
940
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07


Water Levels, PG-48MA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1140
1120
1100
1080
1060
1040
1020
1000
980
960
940
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

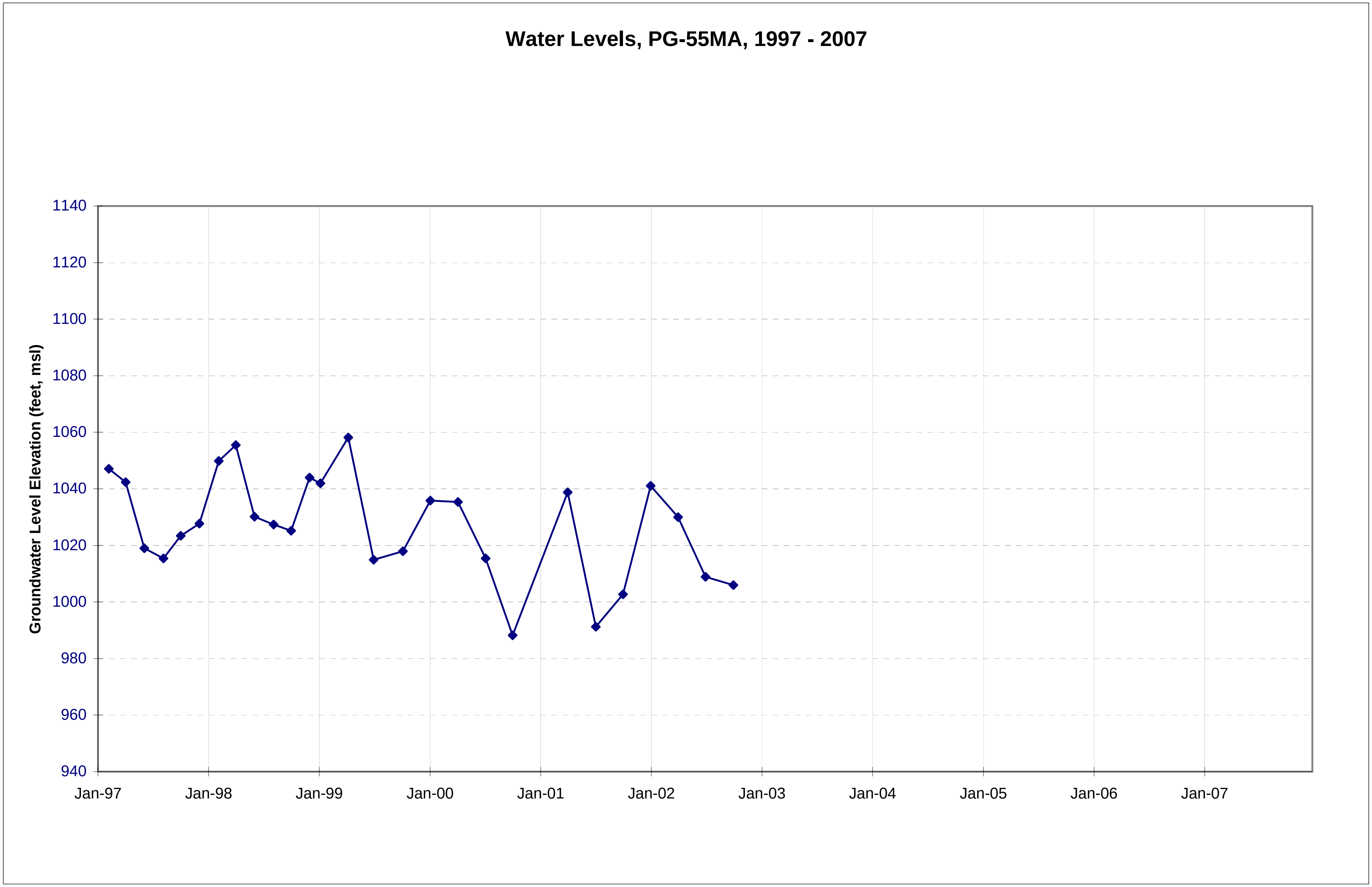

Water Levels, PG-49MA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1140
1120
1100
1080
1060
1040
1020
1000
980
960
940
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07


Water Levels, PG-50MA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1140
1120
1100
1080
1060
1040
1020
1000
980
960
940
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

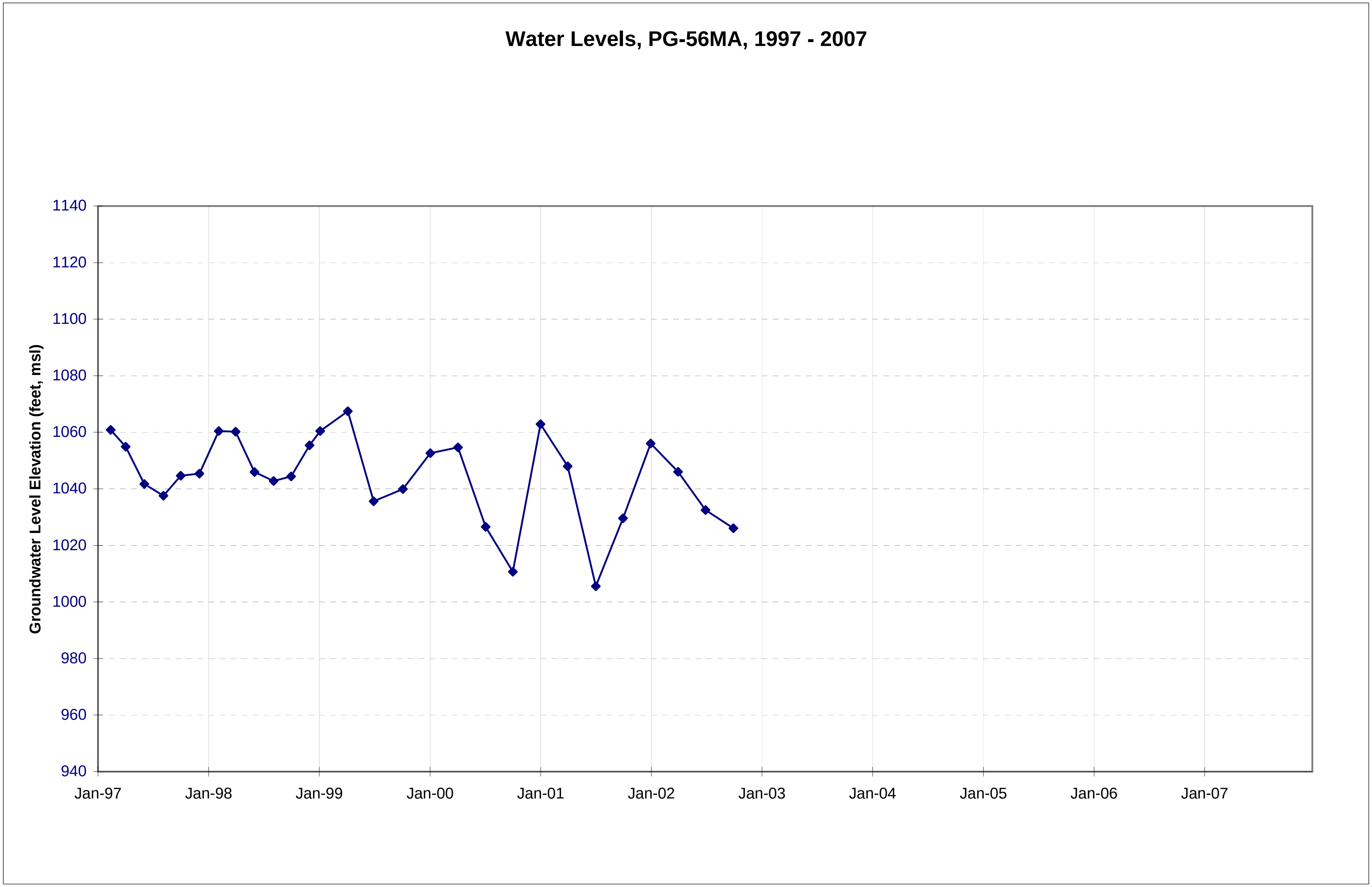


Water Levels, PG-51MA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1140
1120
1100
1080
1060
1040
1020
1000
980
960
940
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

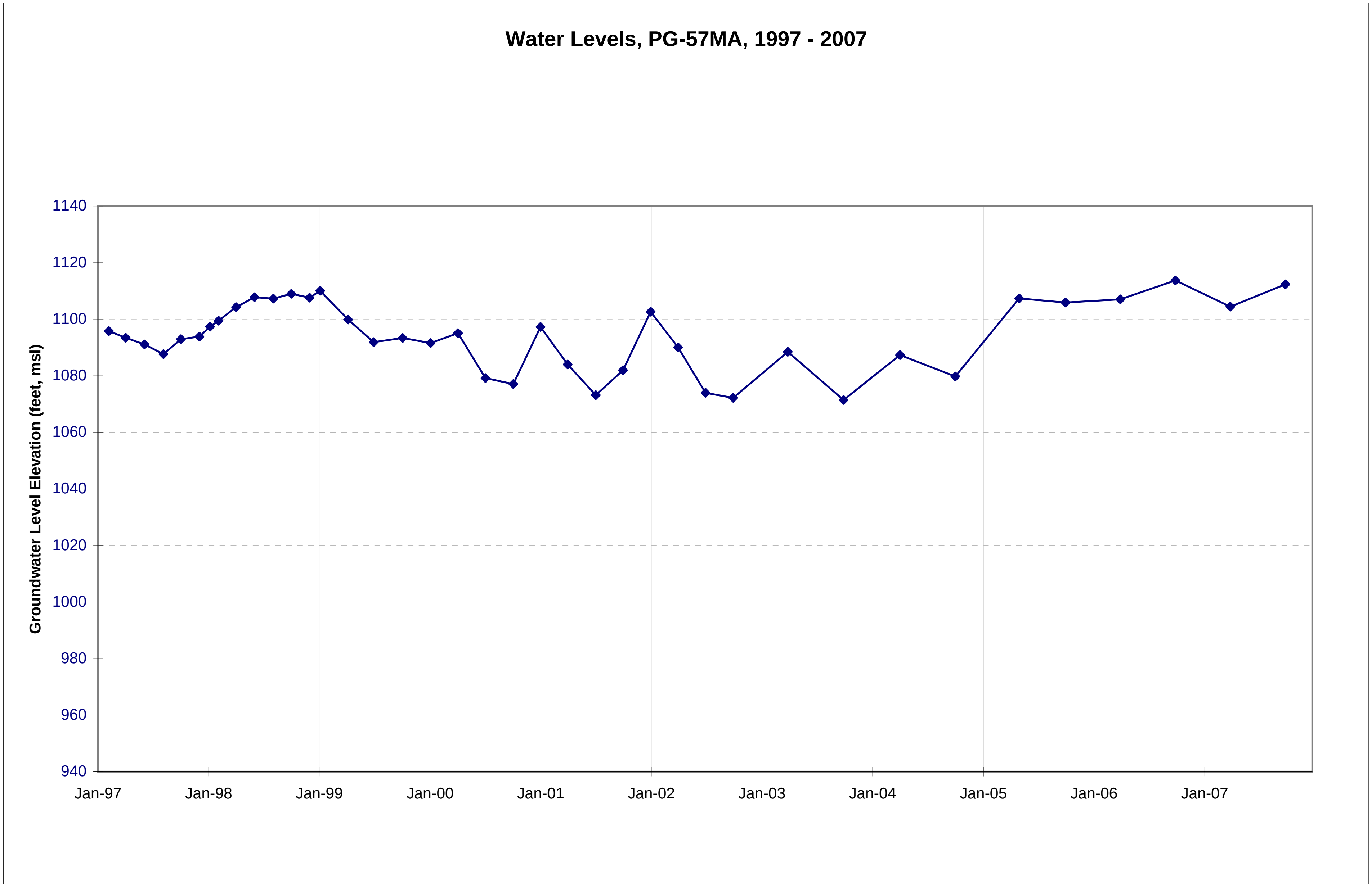

Water Levels, PG-54MA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1140
1120
1100
1080
1060
1040
1020
1000
980
960
940
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07



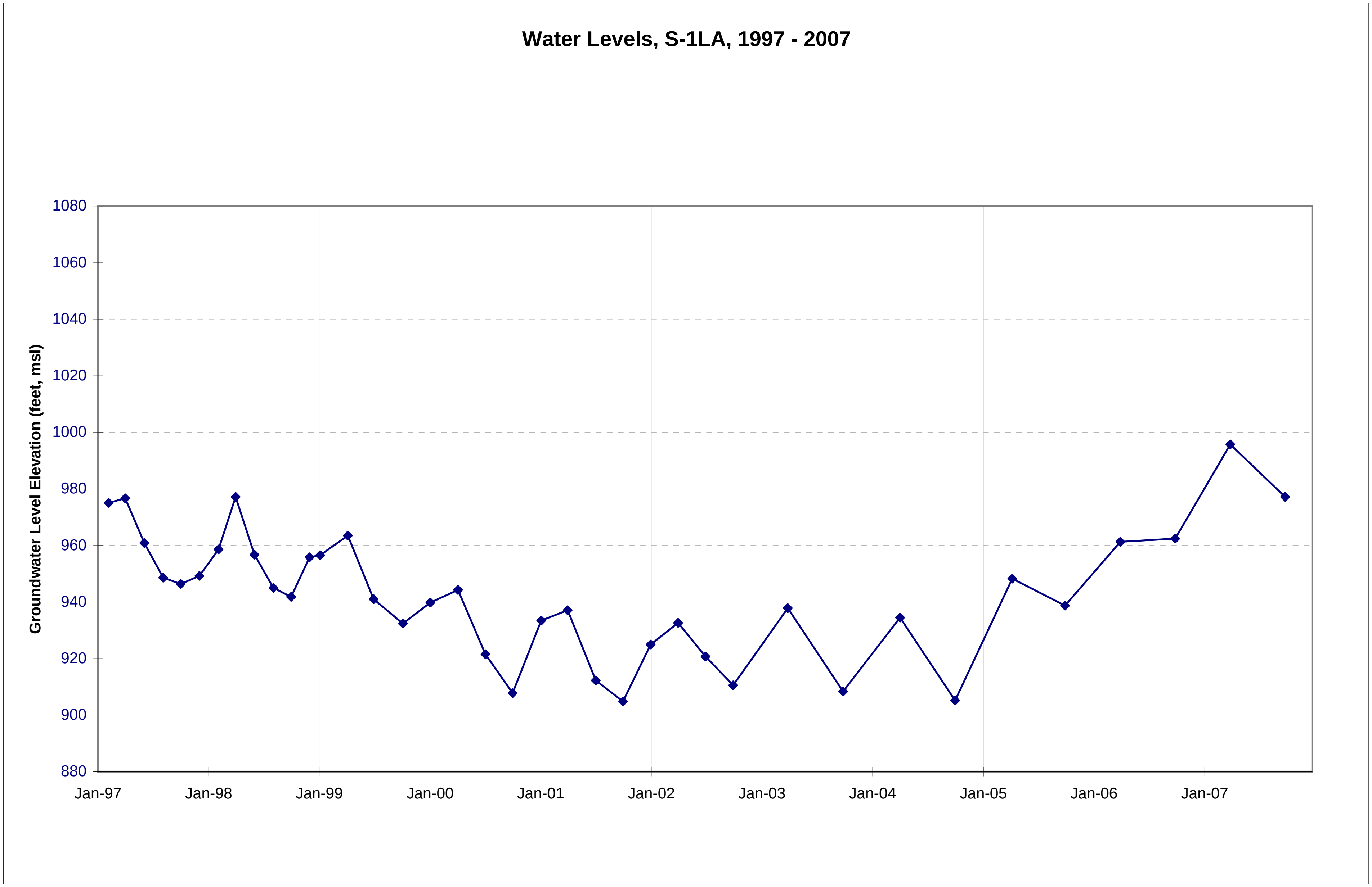
Water Levels, PG-55MA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1140
1120
1100
1080
1060
1040
1020
1000
980
960
940
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07



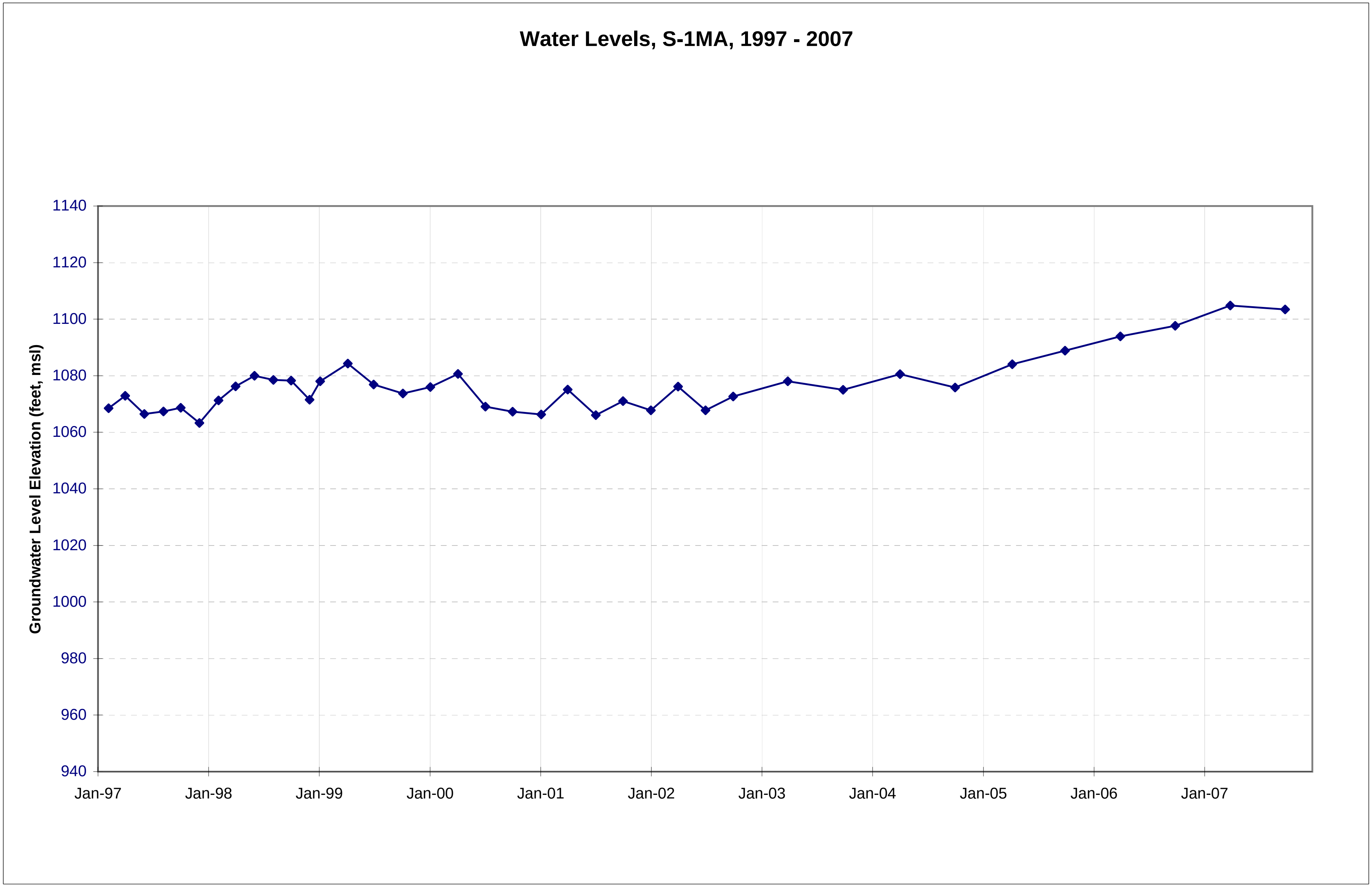
Water Levels, PG-56MA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1140
1120
1100
1080
1060
1040
1020
1000
980
960
940
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

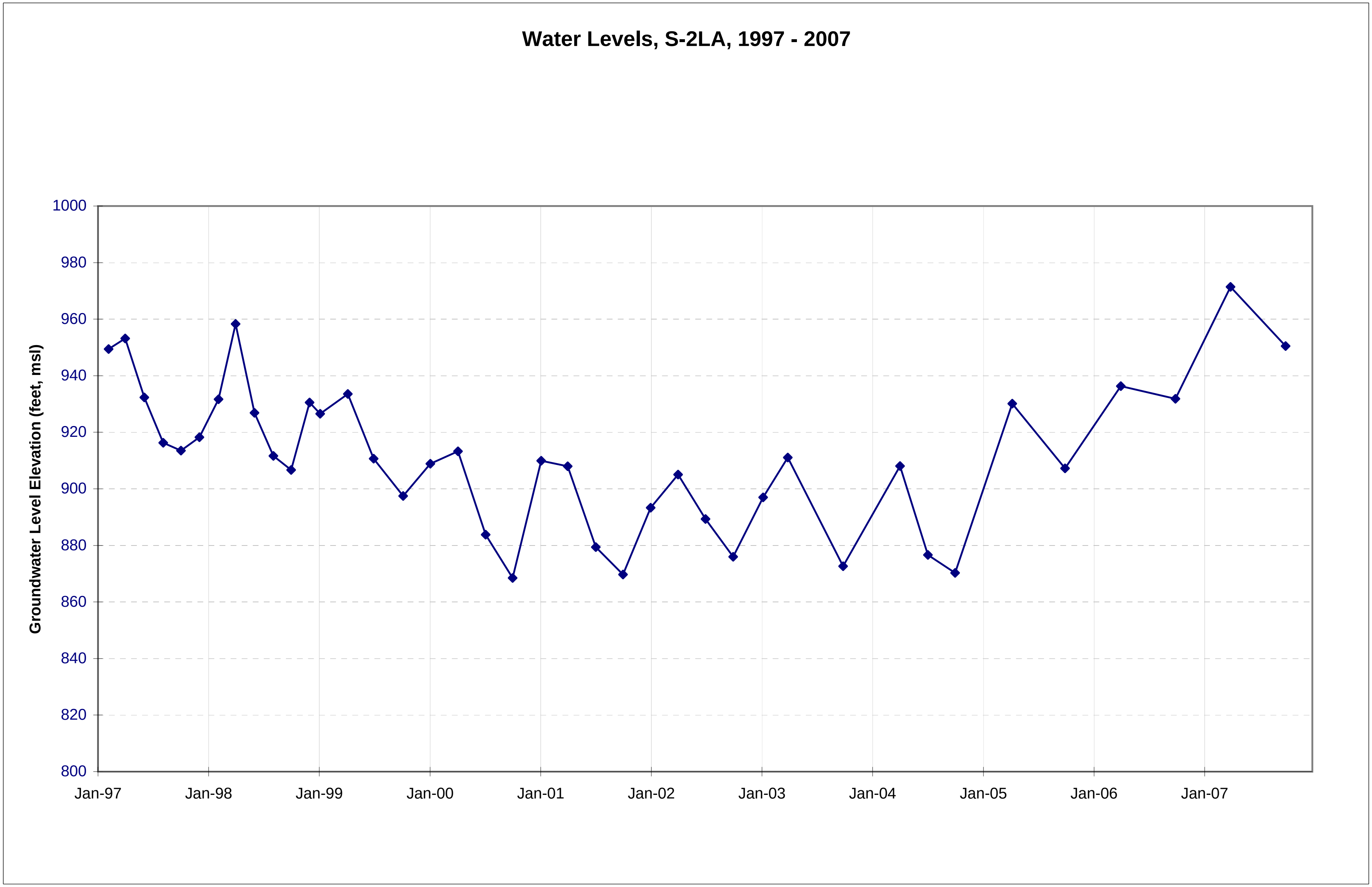


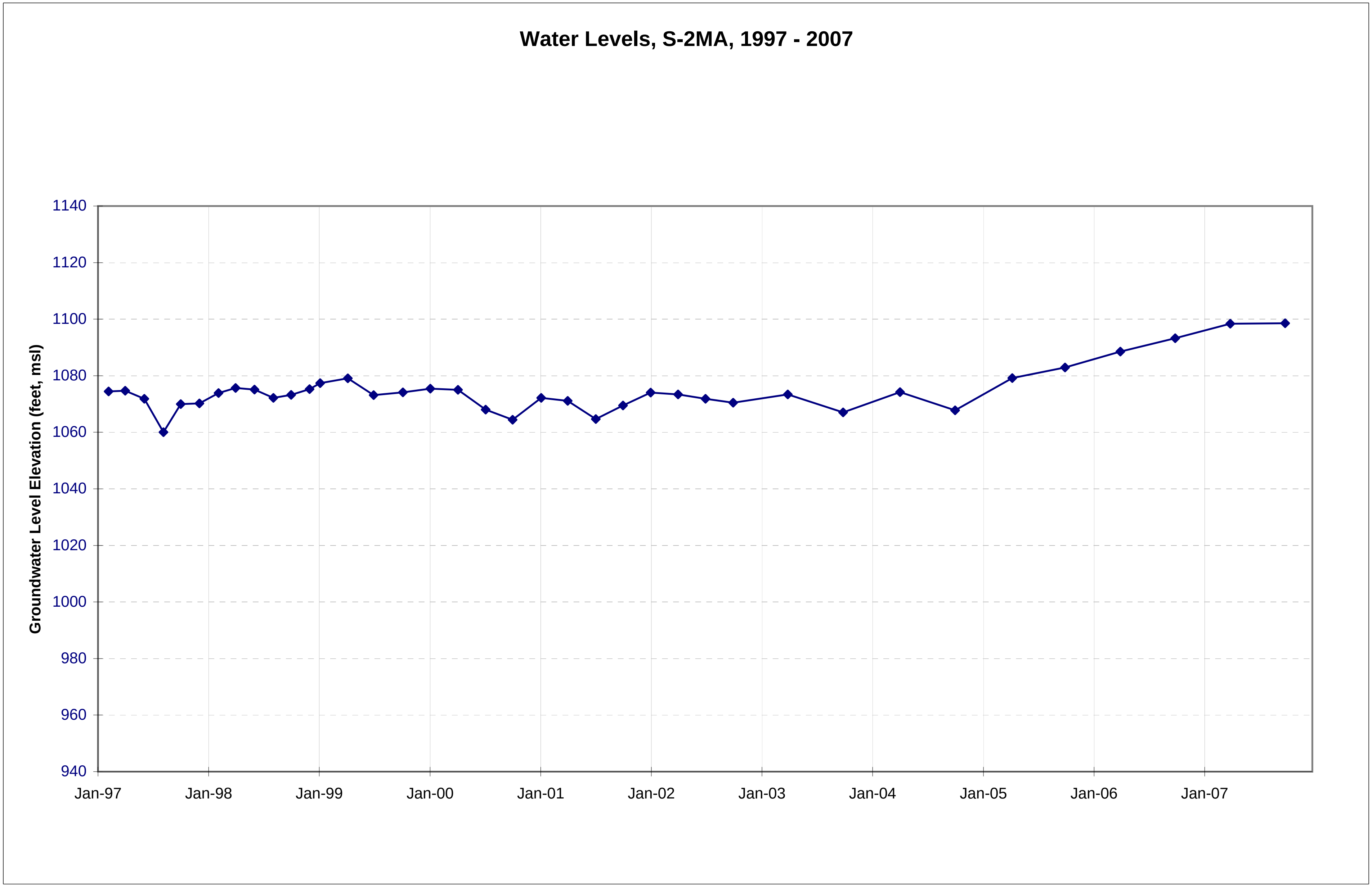
Water Levels, PG-57MA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1140
1120
1100
1080
1060
1040
1020
1000
980
960
940
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

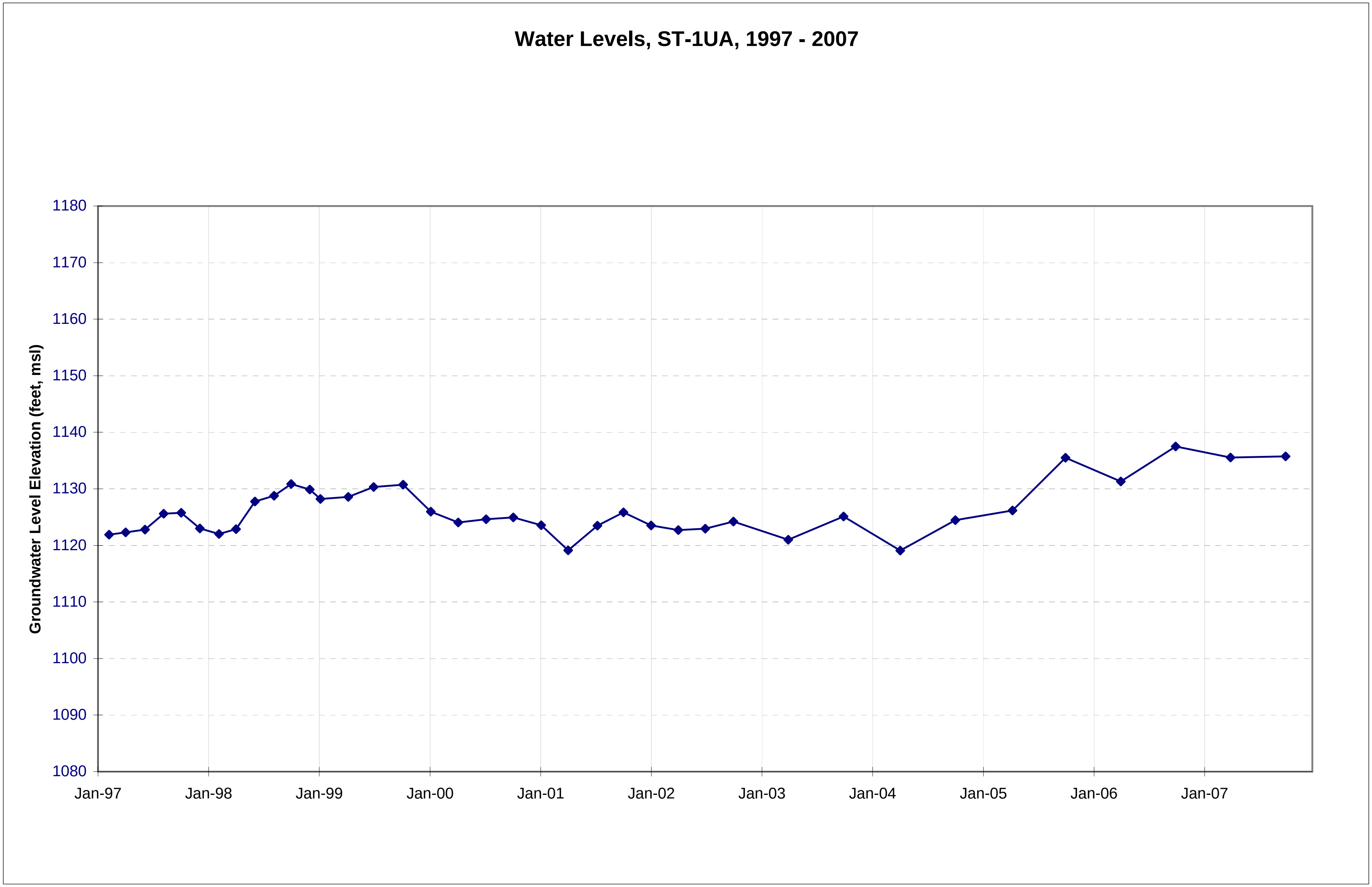


Water Levels, S-1LA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1080
1060
1040
1020
1000
980
960
940
920
900
880
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

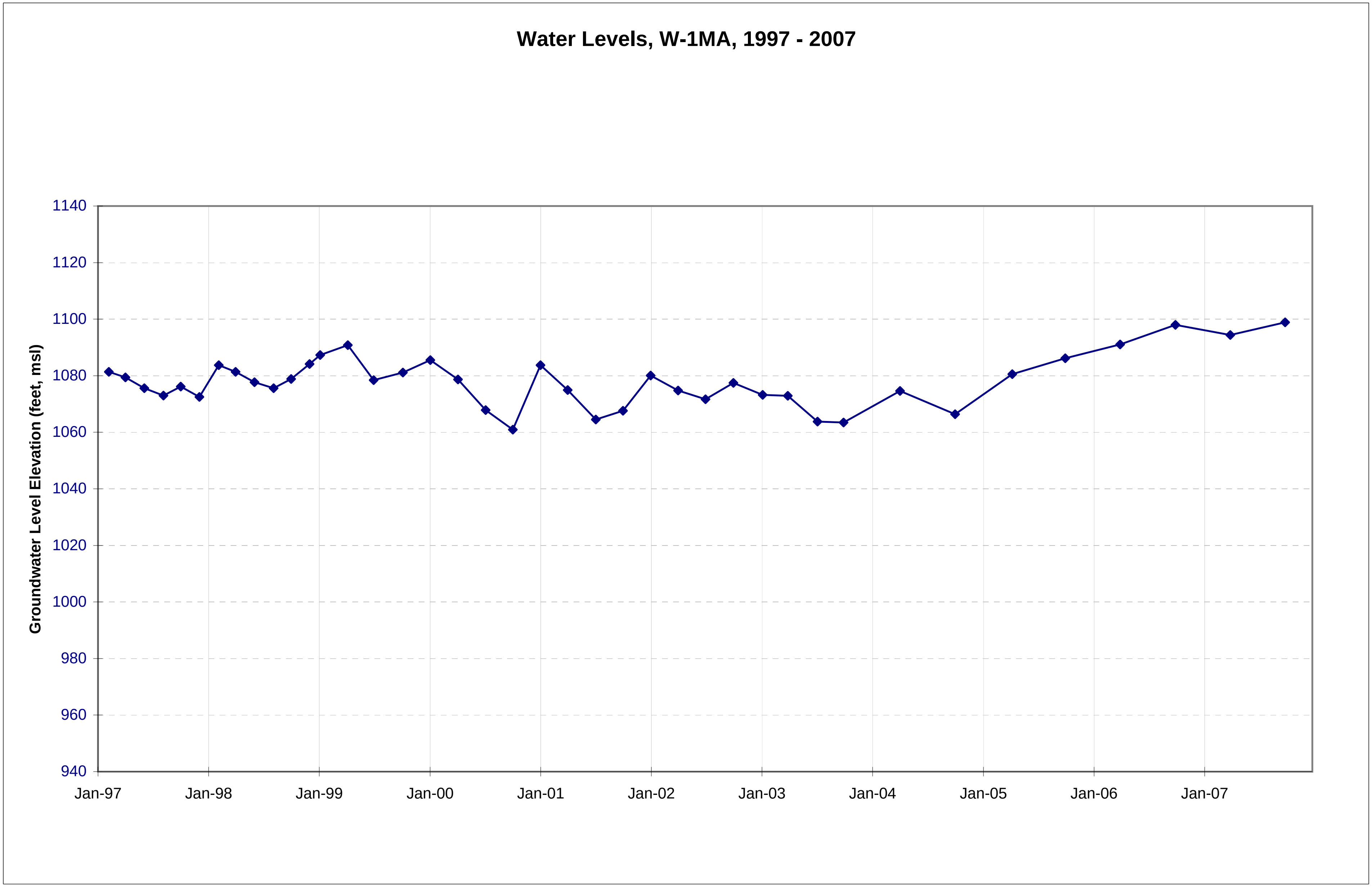

Water Levels, S-1MA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1140
1120
1100
1080
1060
1040
1020
1000
980
960
940
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07


Water Levels, S-2LA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1000
980
960
940
920
900
880
860
840
820
800
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

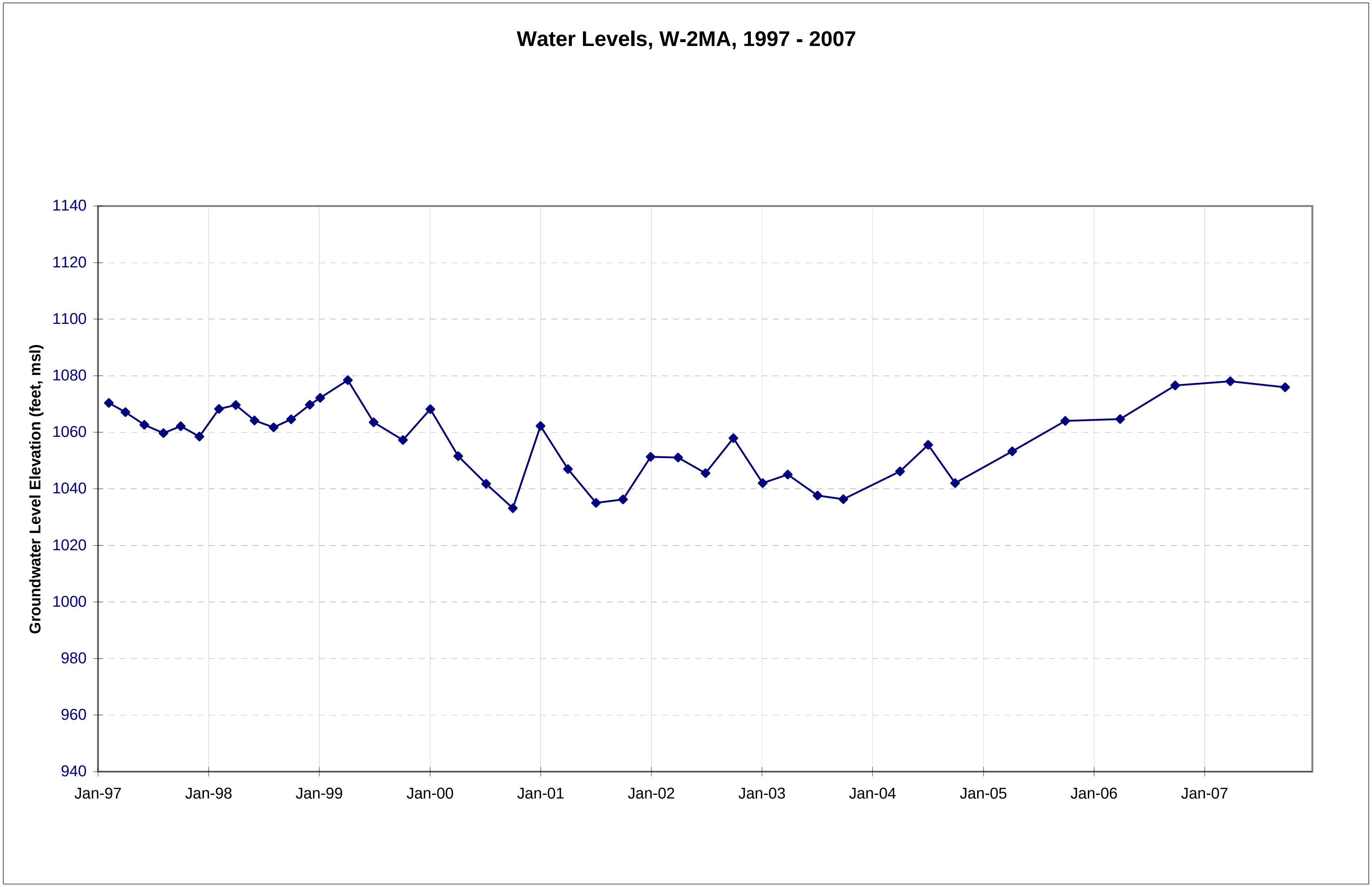

Water Levels, S-2MA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1140
1120
1100
1080
1060
1040
1020
1000
980
960
940
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07



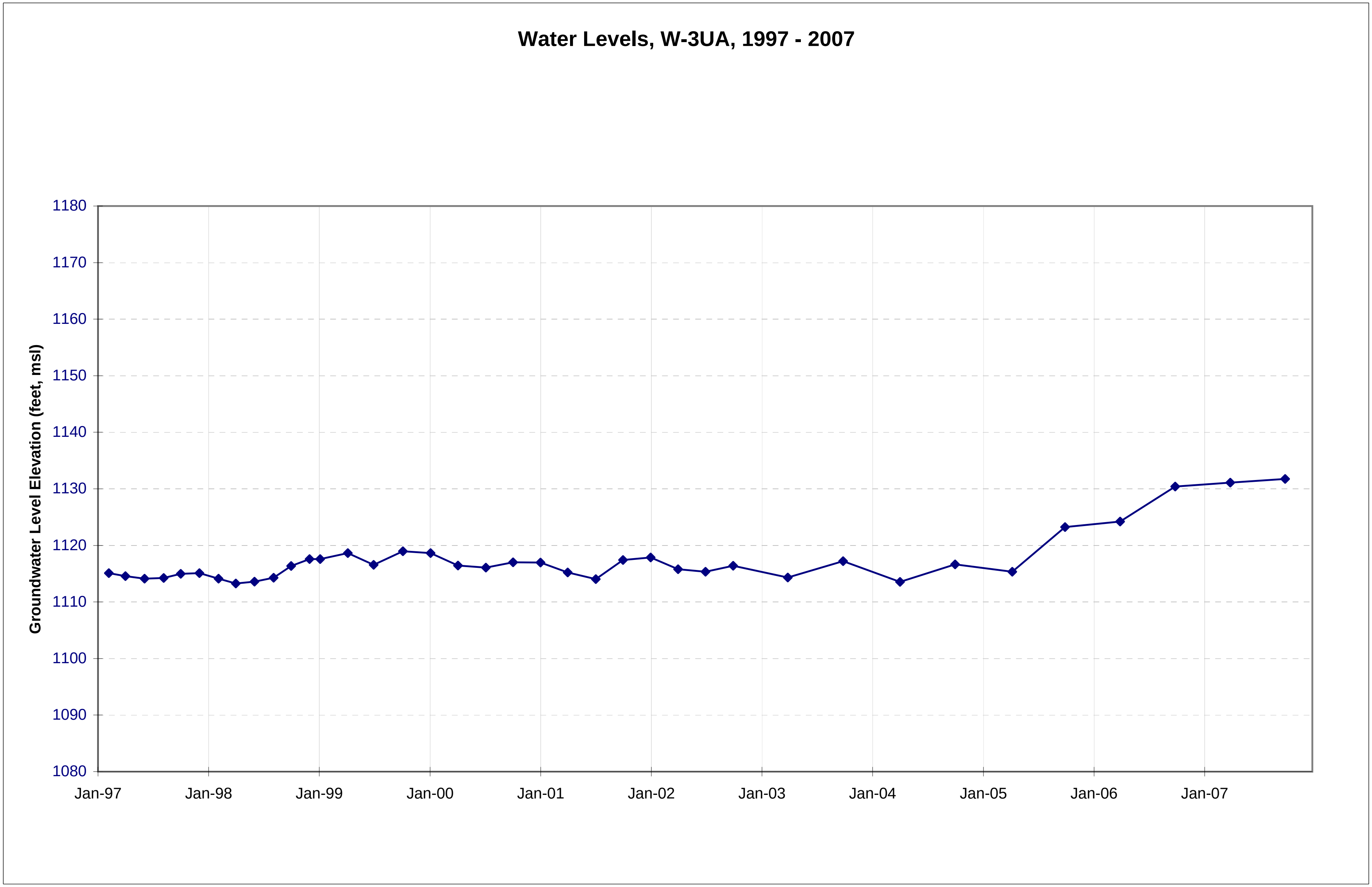
Water Levels, ST-1UA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1180
1170
1160
1150
1140
1130
1120
1110
1100
1090
1080
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07



Water Levels, W-1MA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1140
1120
1100
1080
1060
1040
1020
1000
980
960
940
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07



Water Levels, W-2MA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1140
1120
1100
1080
1060
1040
1020
1000
980
960
940
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

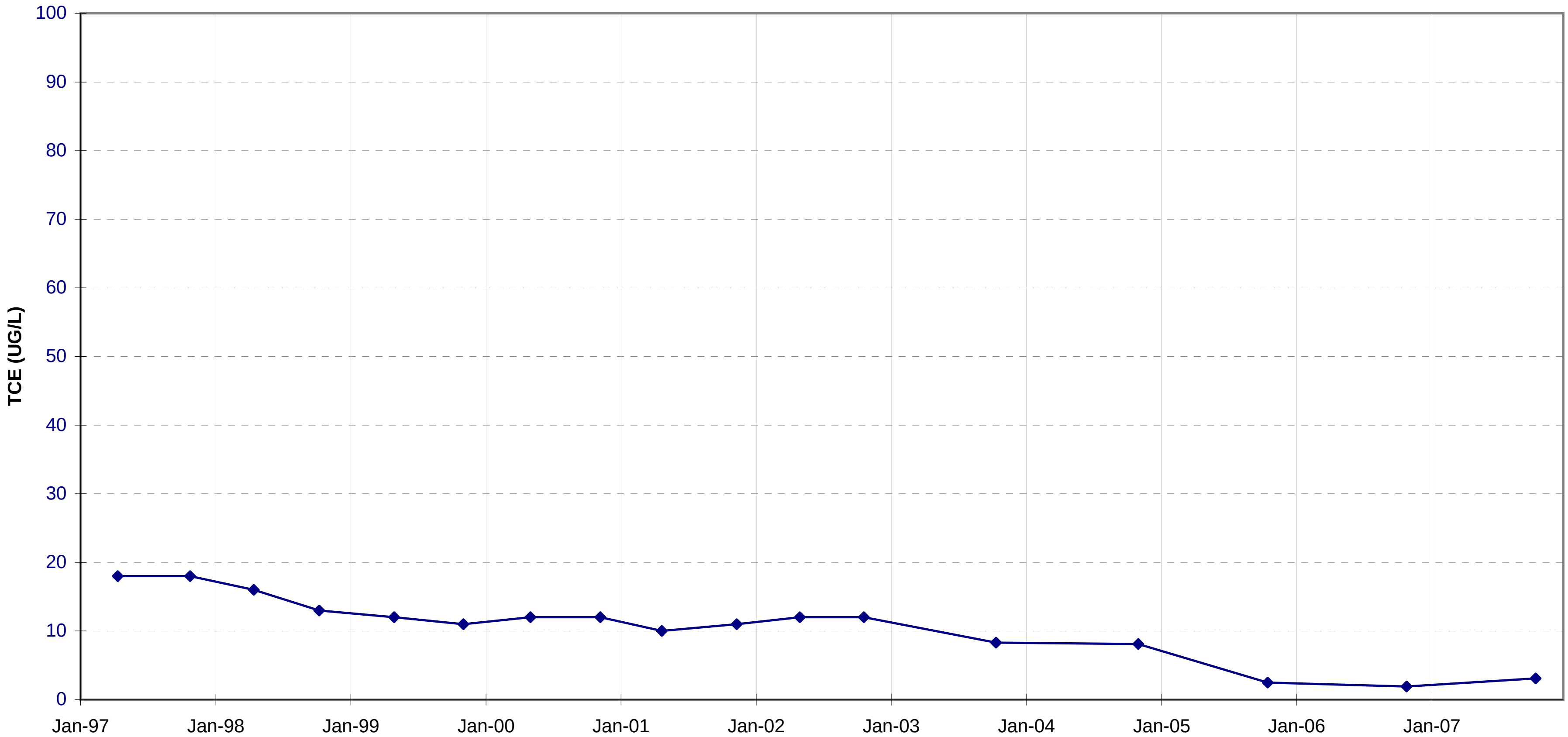


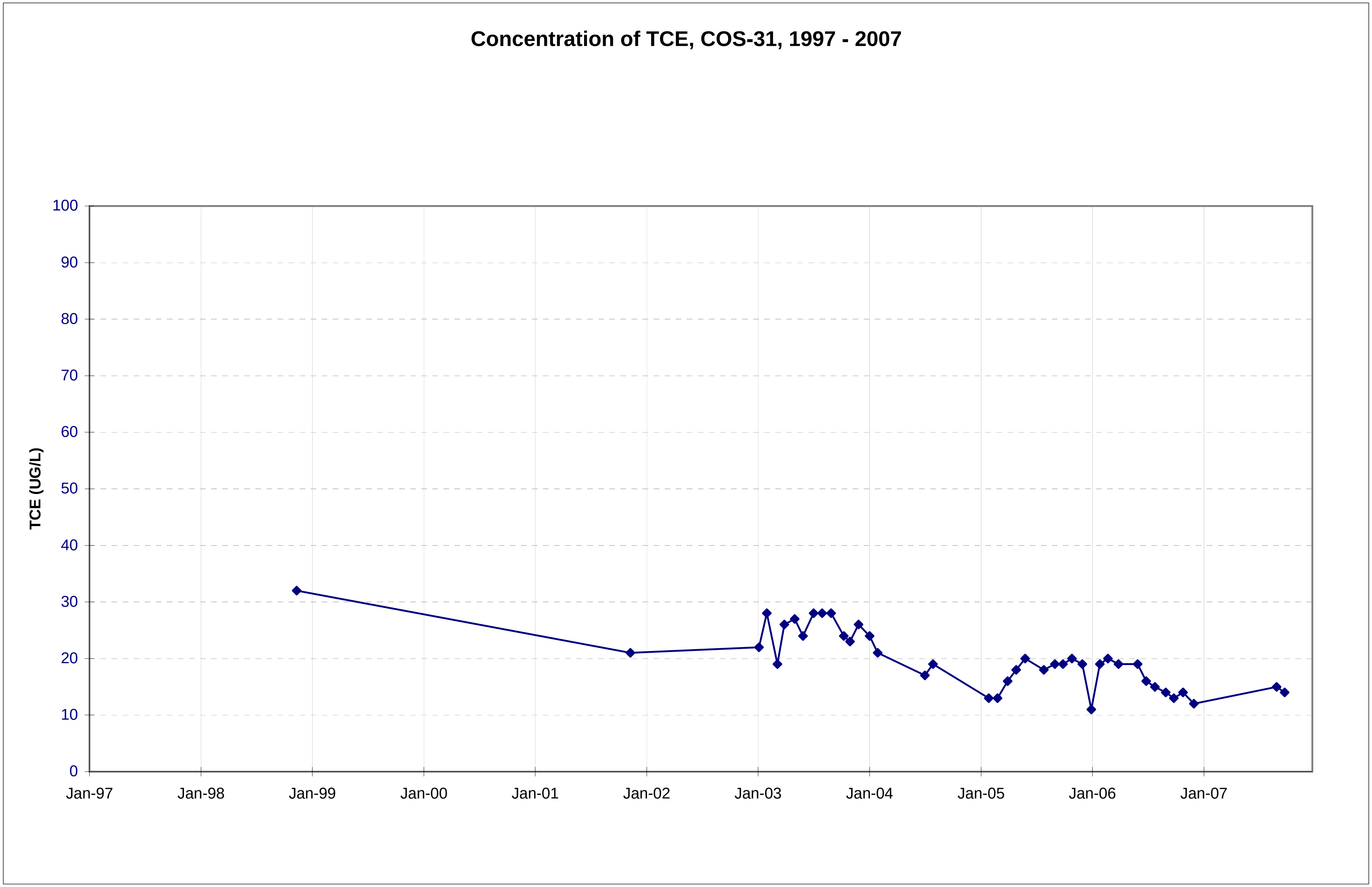
Water Levels, W-3UA, 1997 - 2007
Groundwater Level Elevation (feet, msl)
1180
1170
1160
1150
1140
1130
1120
1110
1100
1090
1080
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

APPENDIX D

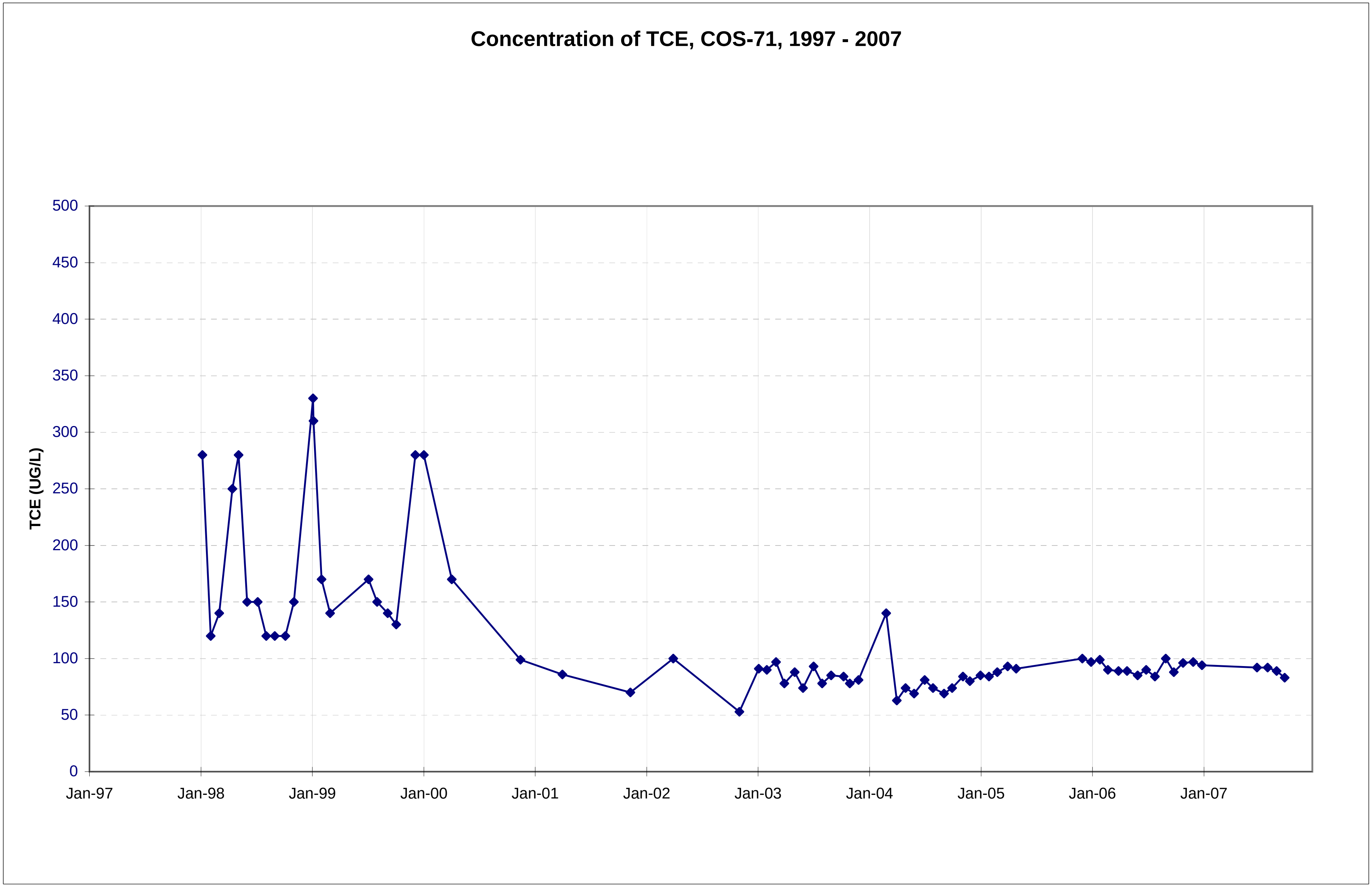
TCE TIME-SERIES DATA FOR NIBW MONITOR WELLS

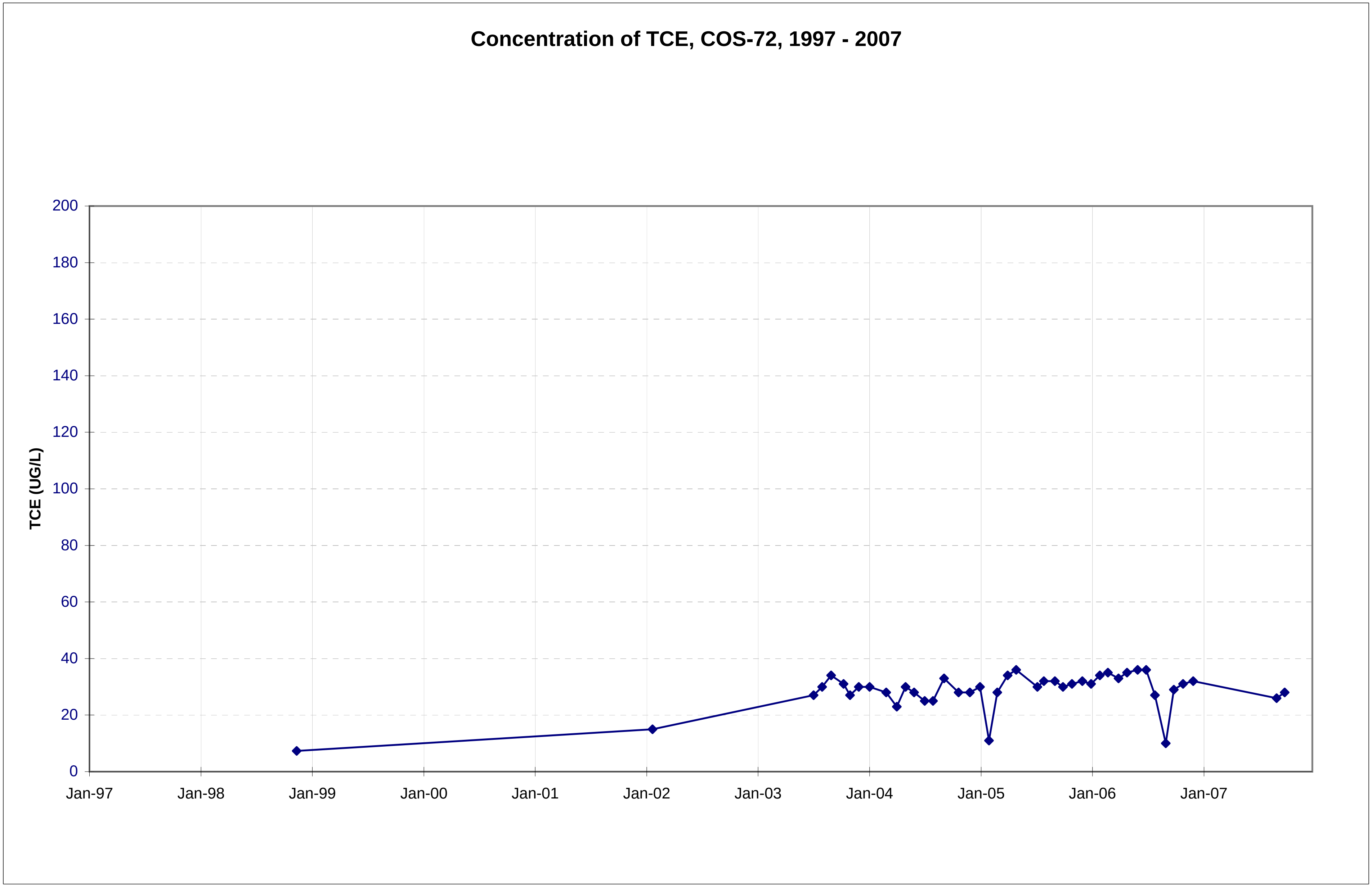
Concentration of TCE, B-J, 1997 - 2007



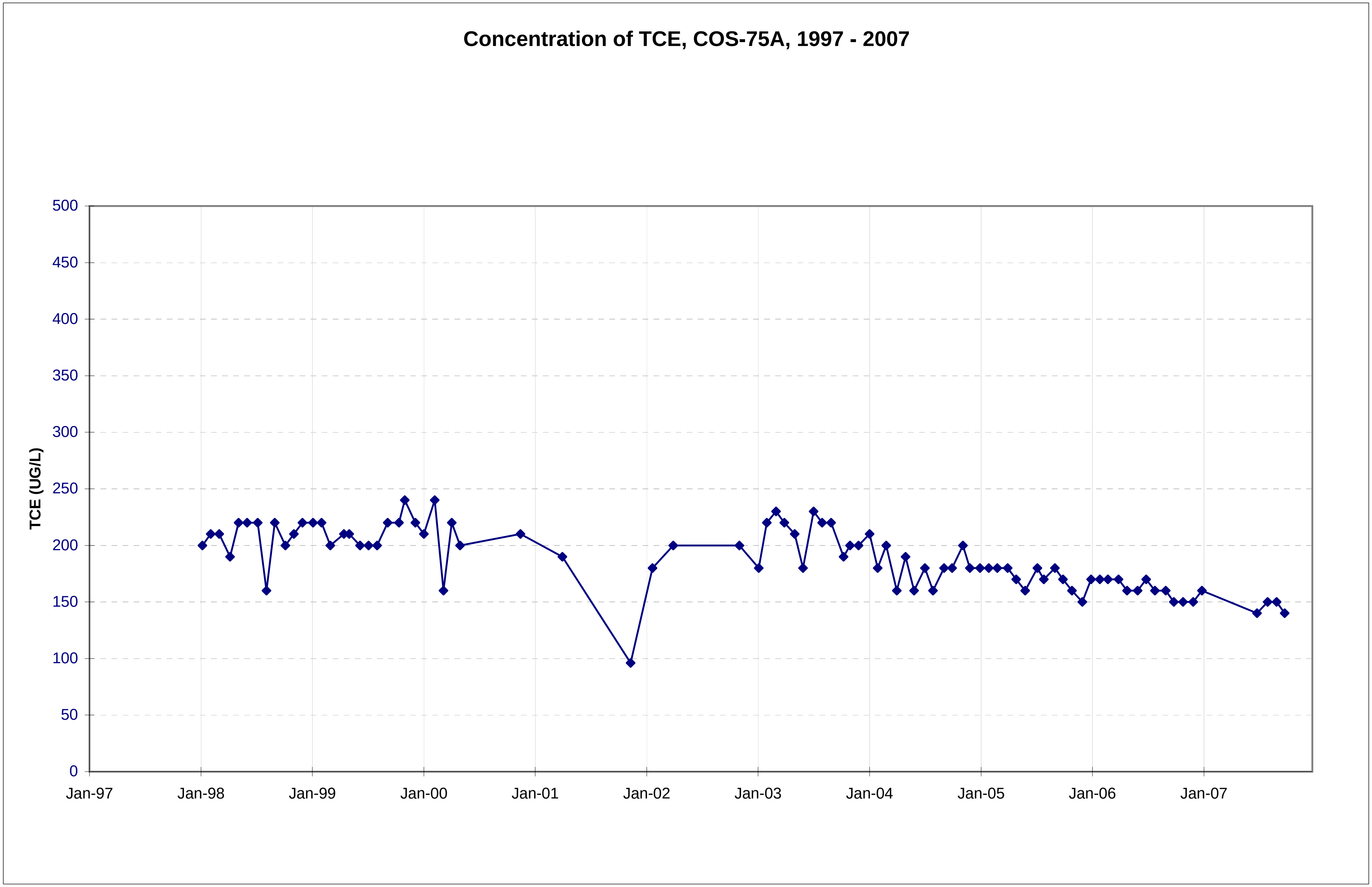


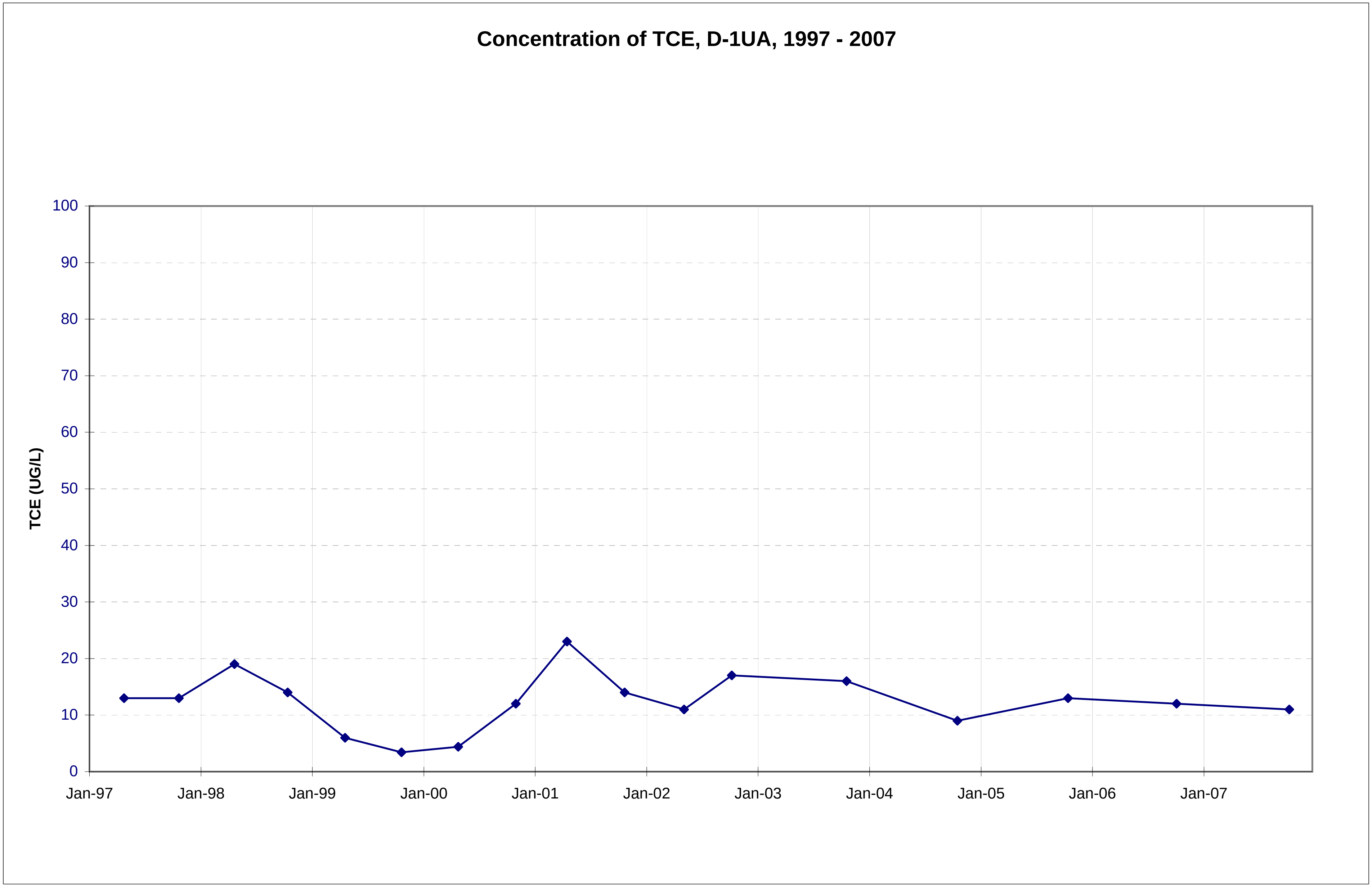
Concentration of TCE, COS-31, 1997 - 2007
TCE (UG/L)
100
90
80
70
60
50
40
30
20
10
0
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07


Concentration of TCE, COS-71, 1997 - 2007
TCE (UG/L)
500
450
400
350
300
250
200
150
100
50
0
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07



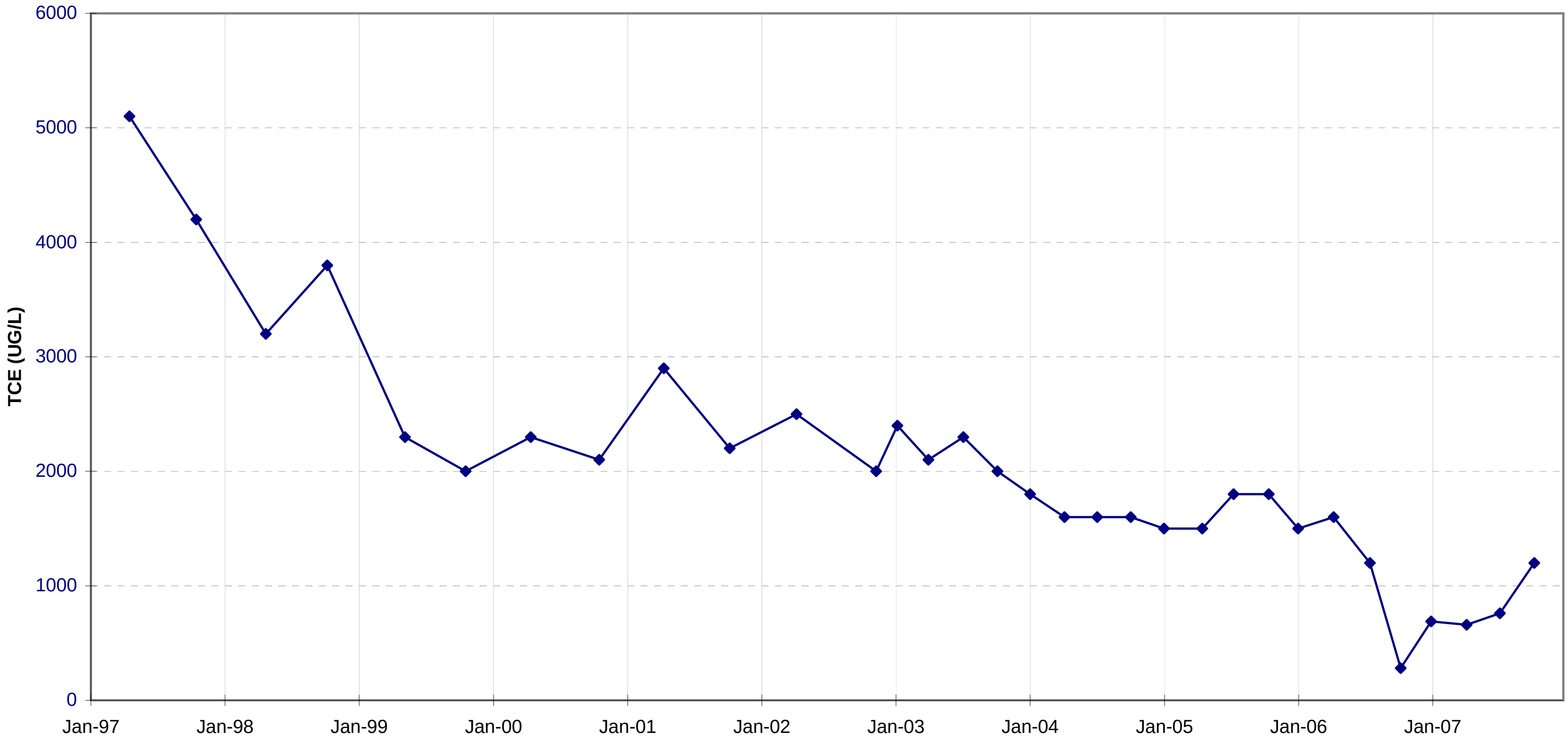
Concentration of TCE, COS-72, 1997 - 2007
TCE (UG/L)
0
20
40
60
80
100
120
140
160
180
200
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

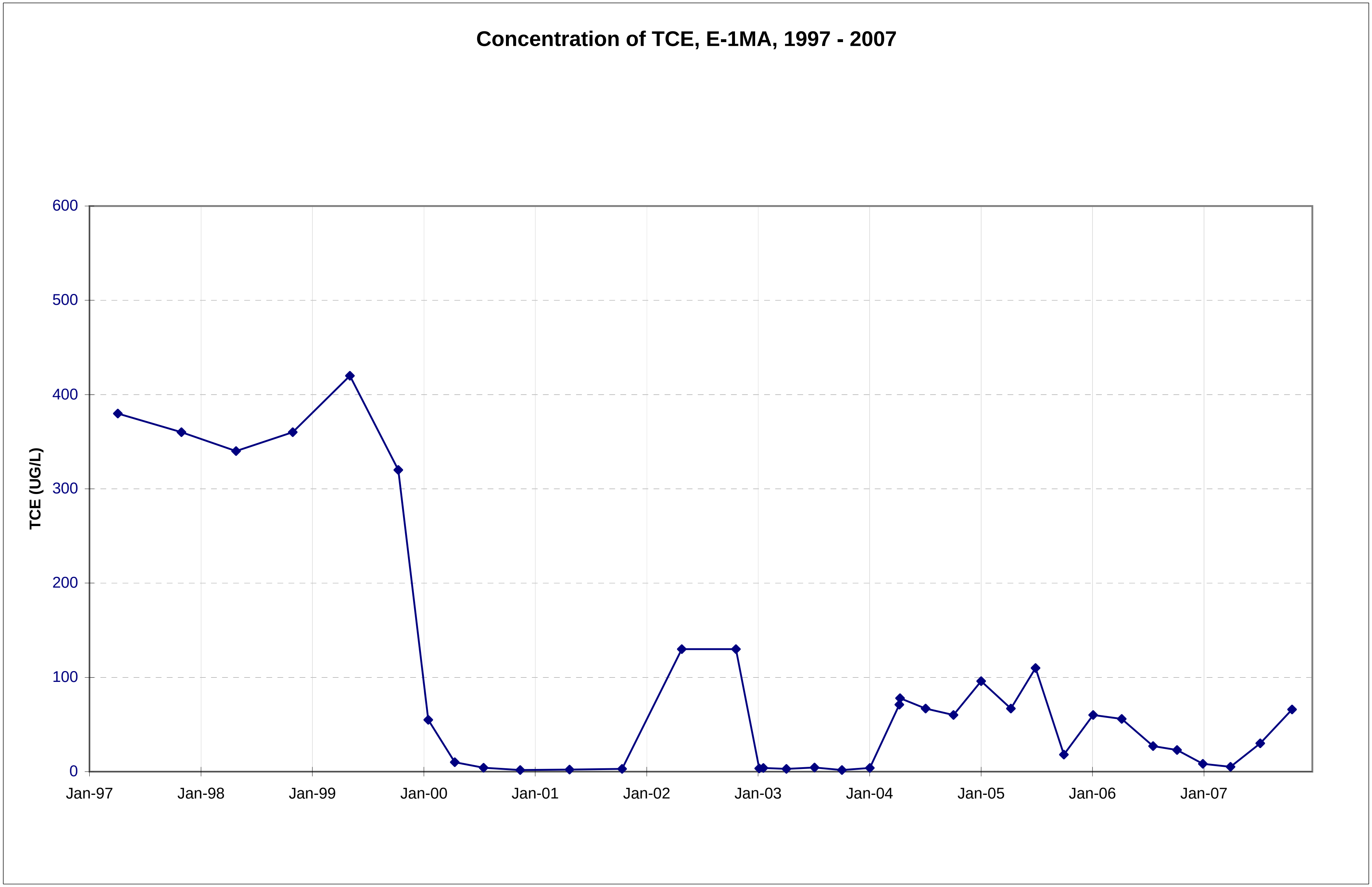

Concentration of TCE, COS-75A, 1997 - 2007
TCE (UG/L)
500
450
400
350
300
250
200
150
100
50
0
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

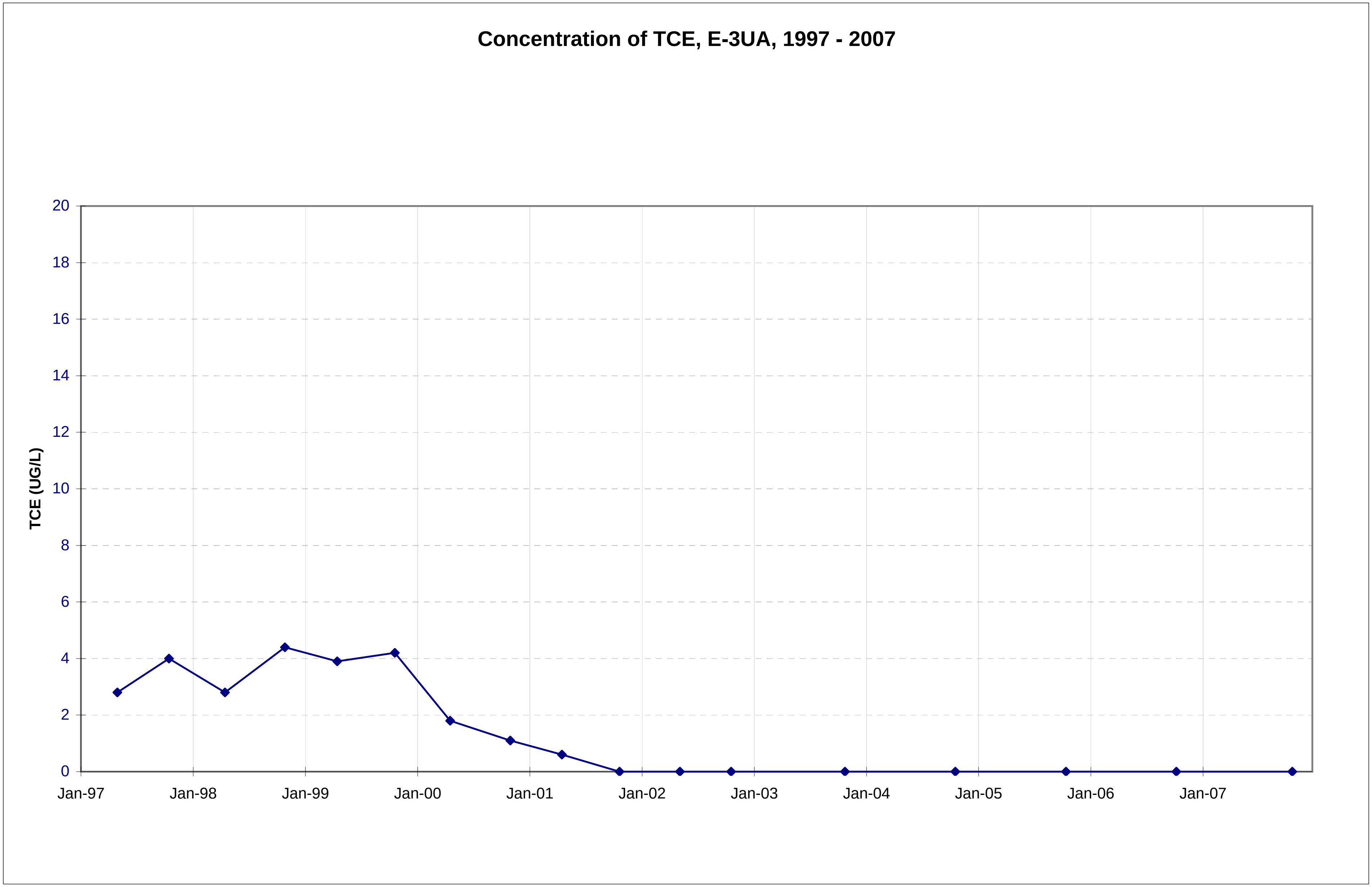


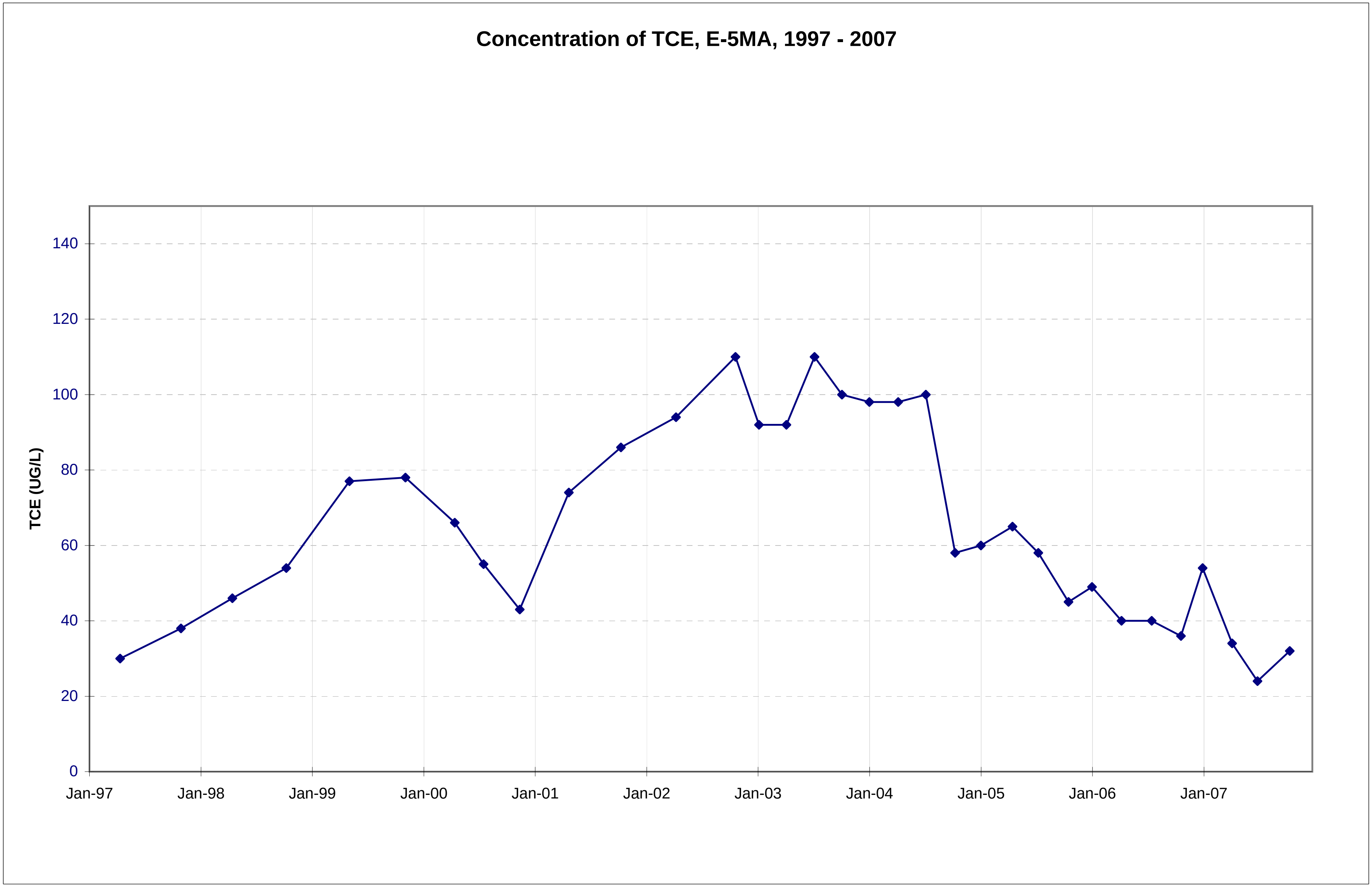
Concentration of TCE, D-1UA, 1997 - 2007
TCE (UG/L)
100
90
80
70
60
50
40
30
20
10
0
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

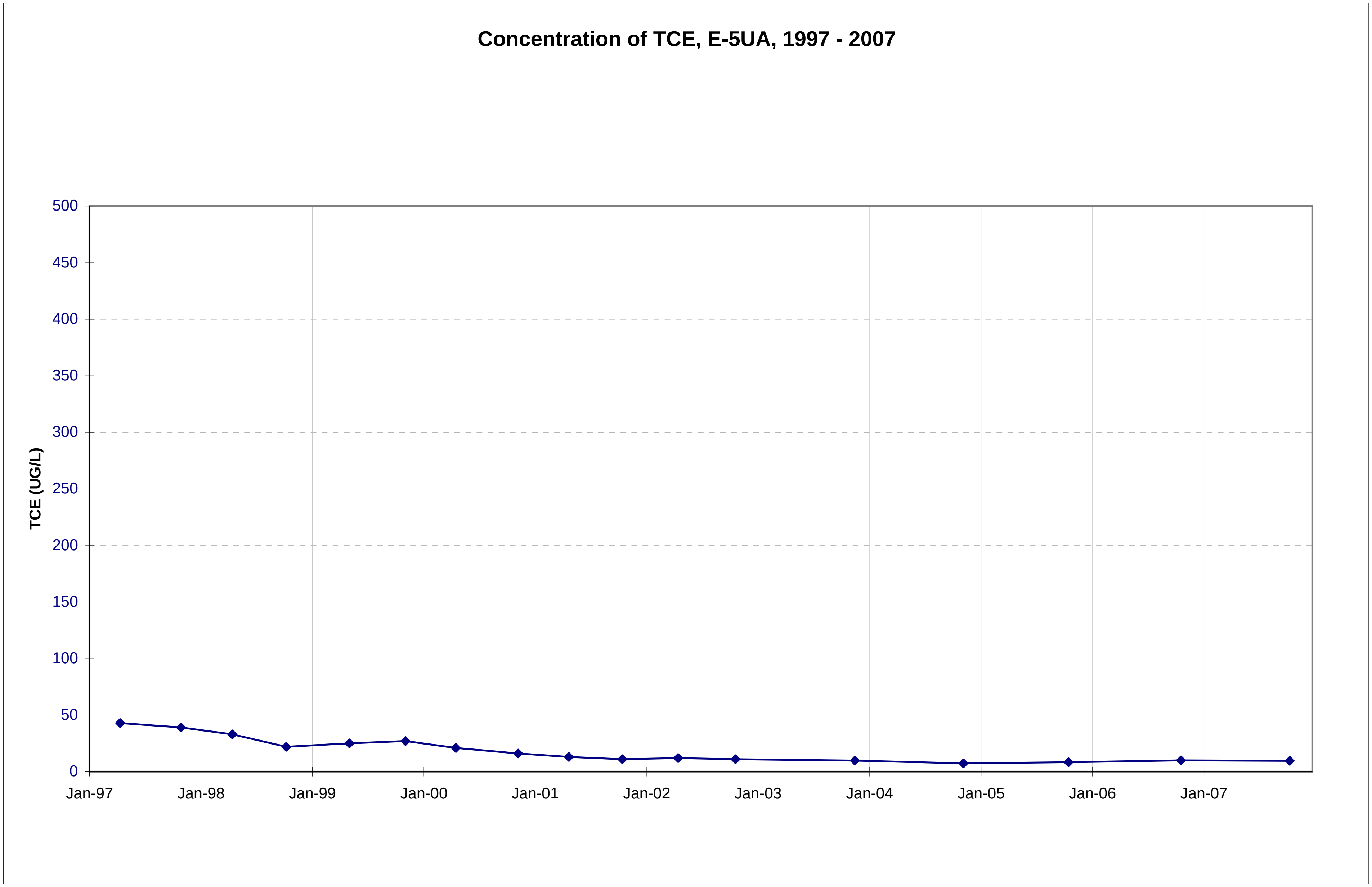
Concentration of TCE, D-2MA, 1997 - 2007

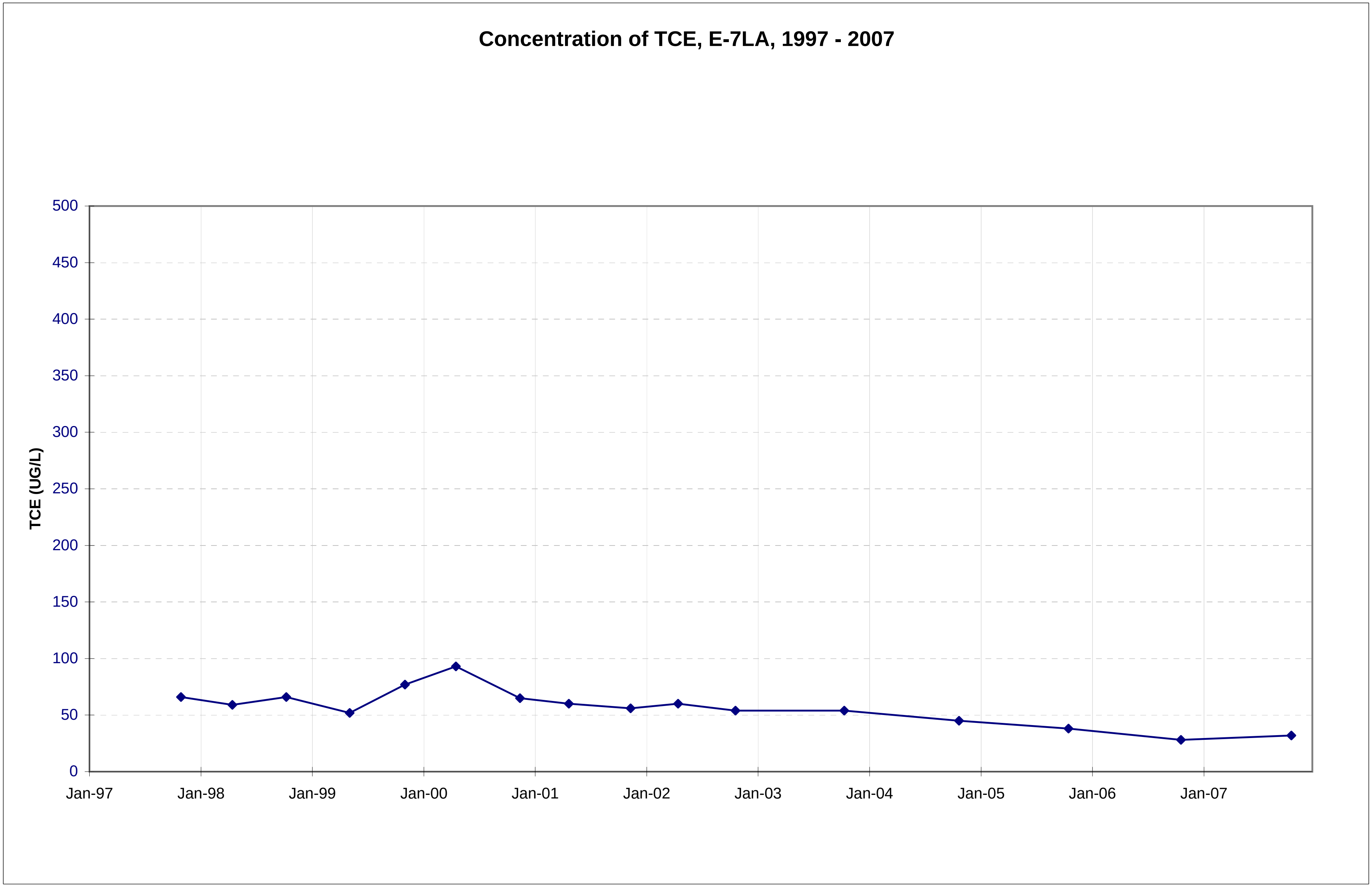



Concentration of TCE, E-1MA, 1997 - 2007
TCE (UG/L)
600
500
400
300
200
100
0
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

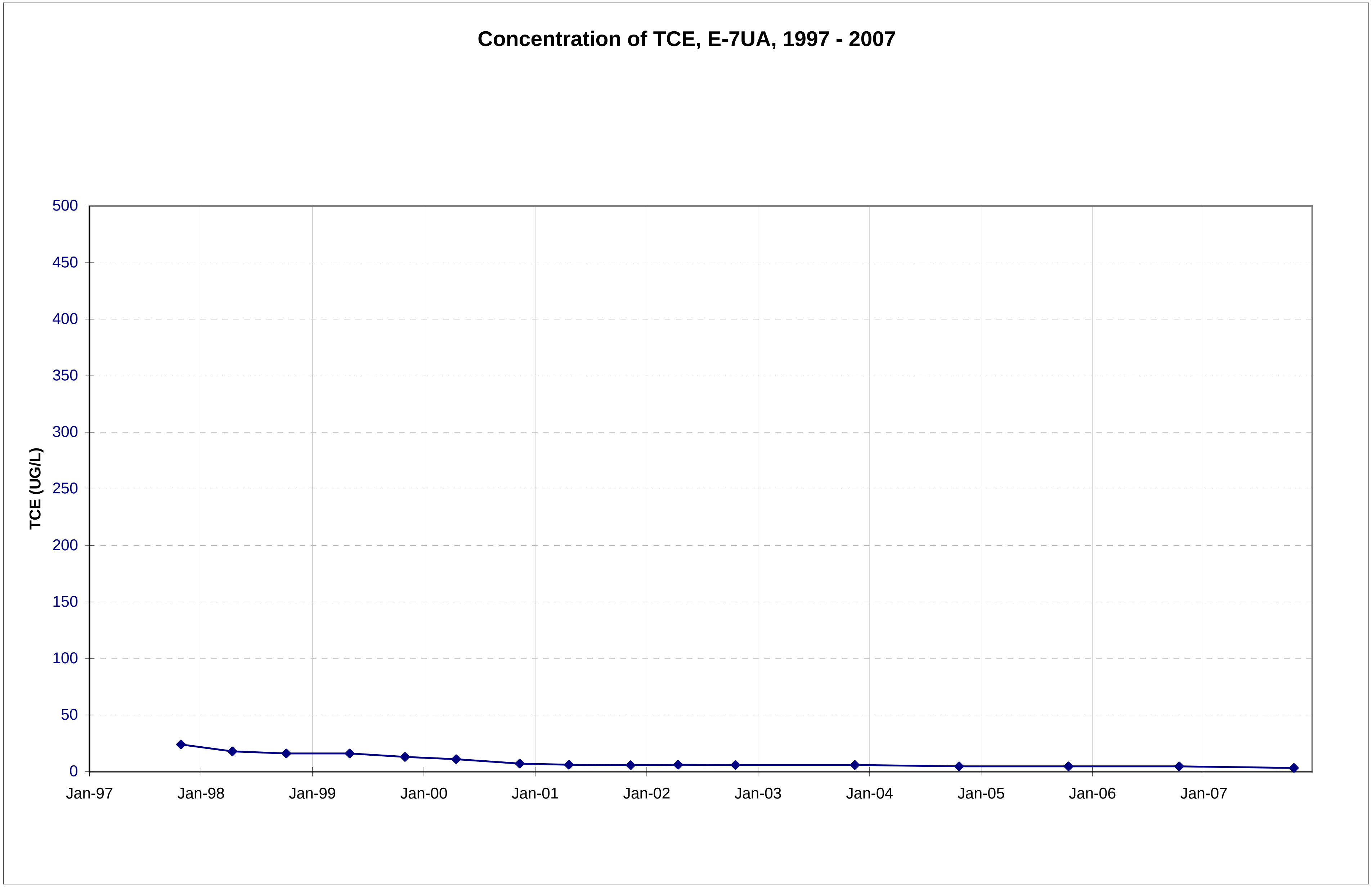

Concentration of TCE, E-3UA, 1997 - 2007
TCE (UG/L)
0
2
4
6
8
10
12
14
16
18
20
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

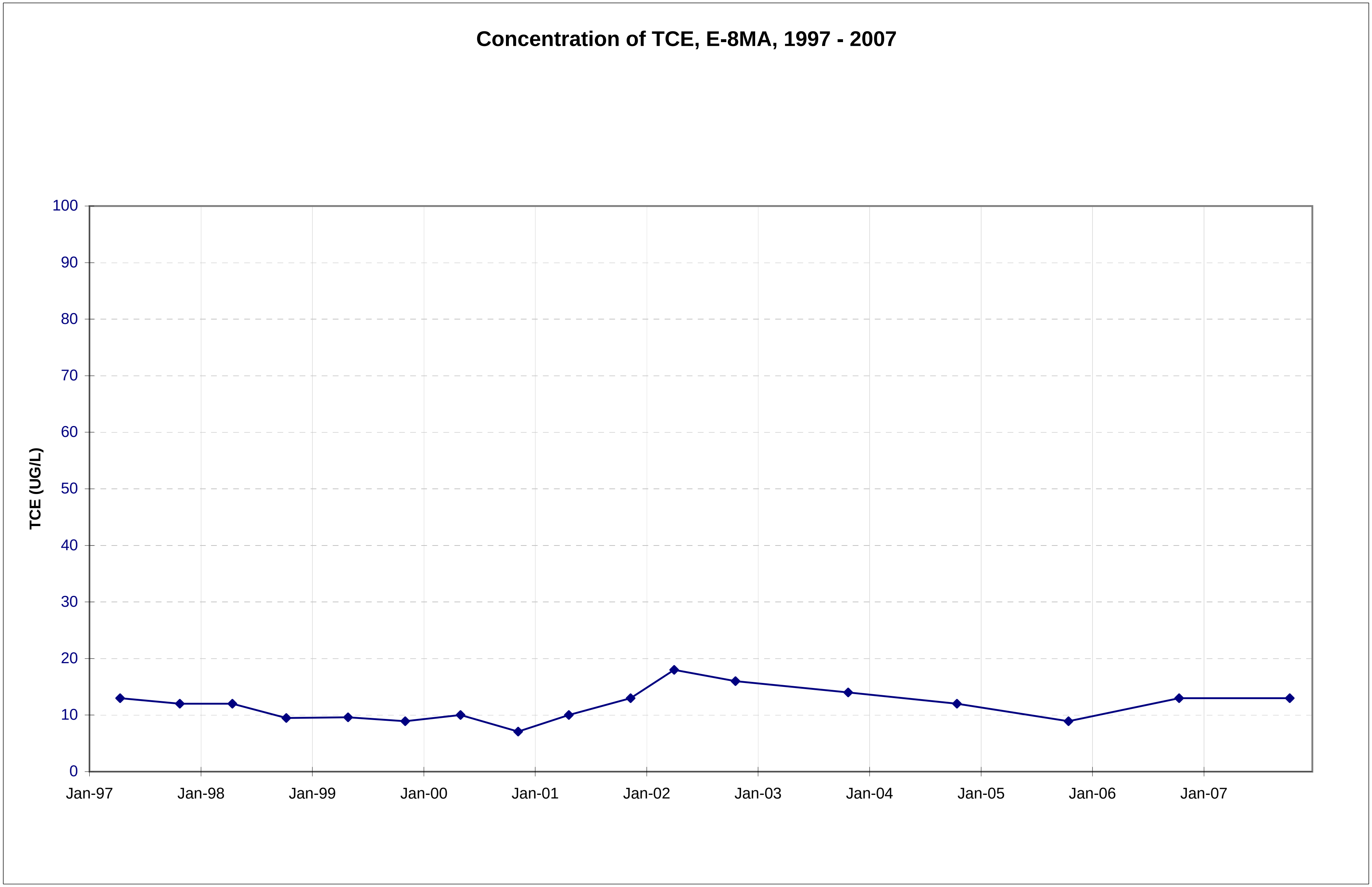

Concentration of TCE, E-5MA, 1997 - 2007
TCE (UG/L)
0
20
40
60
80
100
120
140
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07


Concentration of TCE, E-5UA, 1997 - 2007
TCE (UG/L)
500
450
400
350
300
250
200
150
100
50
0
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

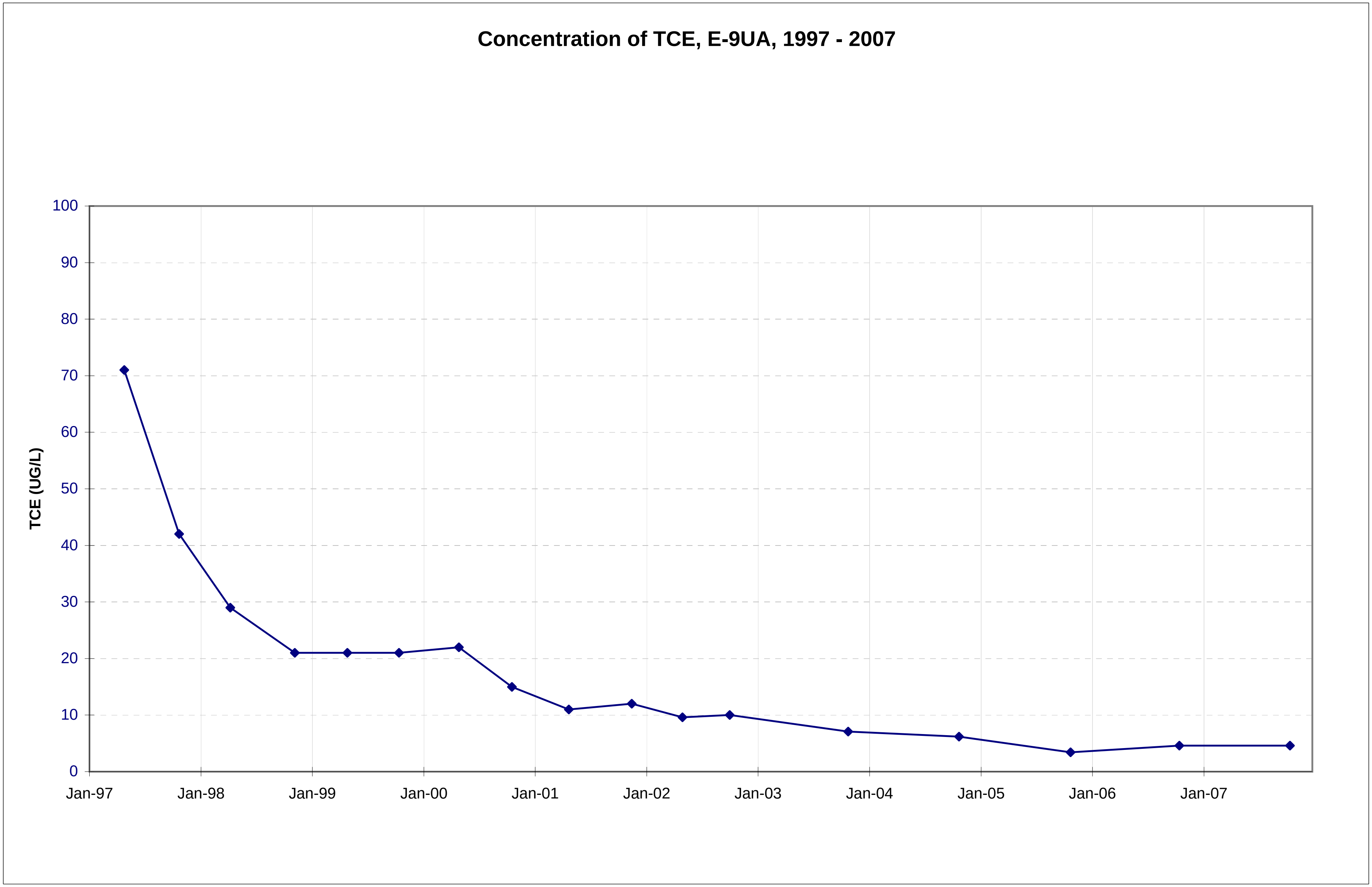


Concentration of TCE, E-7LA, 1997 - 2007
TCE (UG/L)
500
450
400
350
300
250
200
150
100
50
0
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

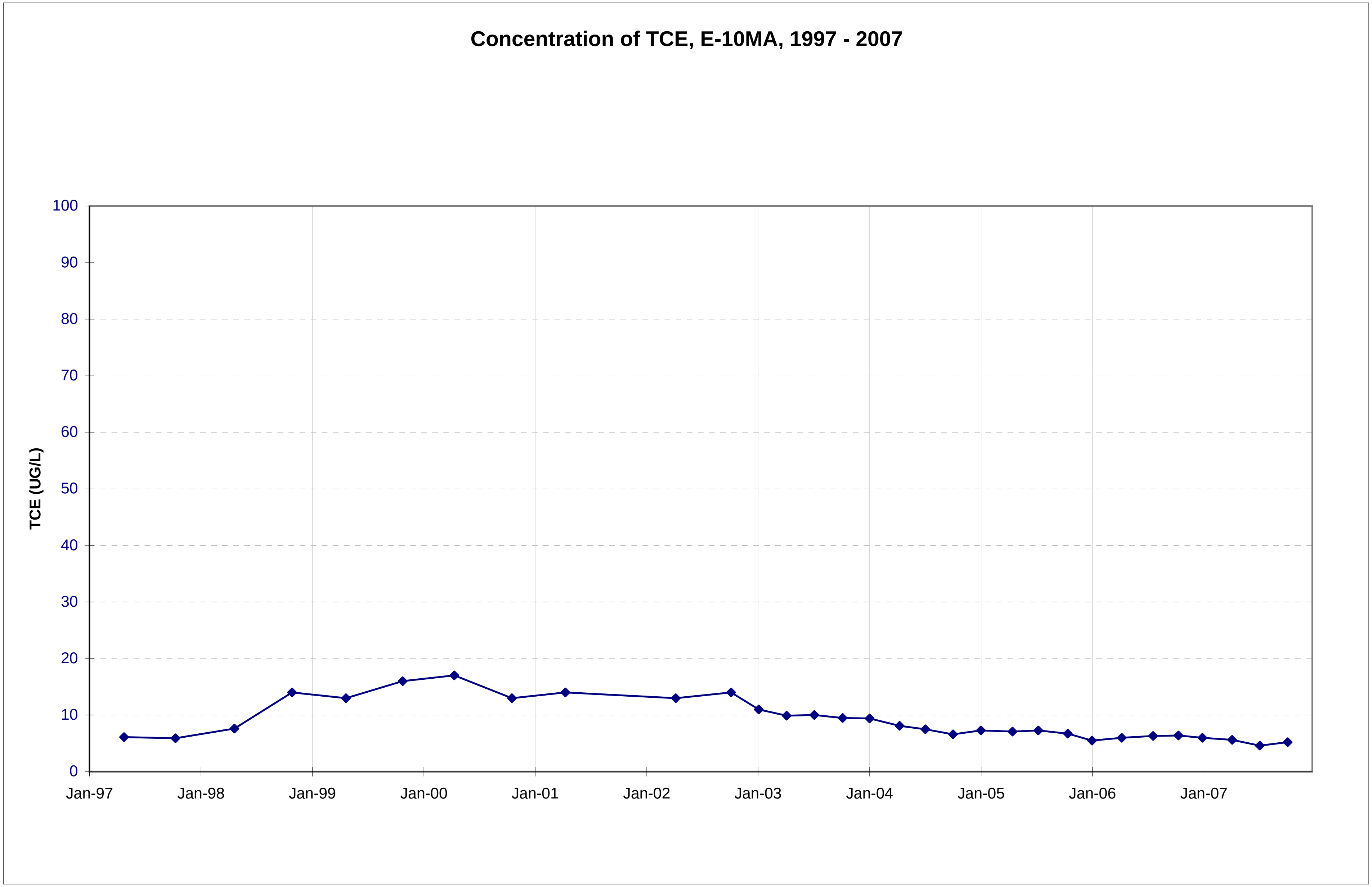

Concentration of TCE, E-7UA, 1997 - 2007
TCE (UG/L)
500
450
400
350
300
250
200
150
100
50
0
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07



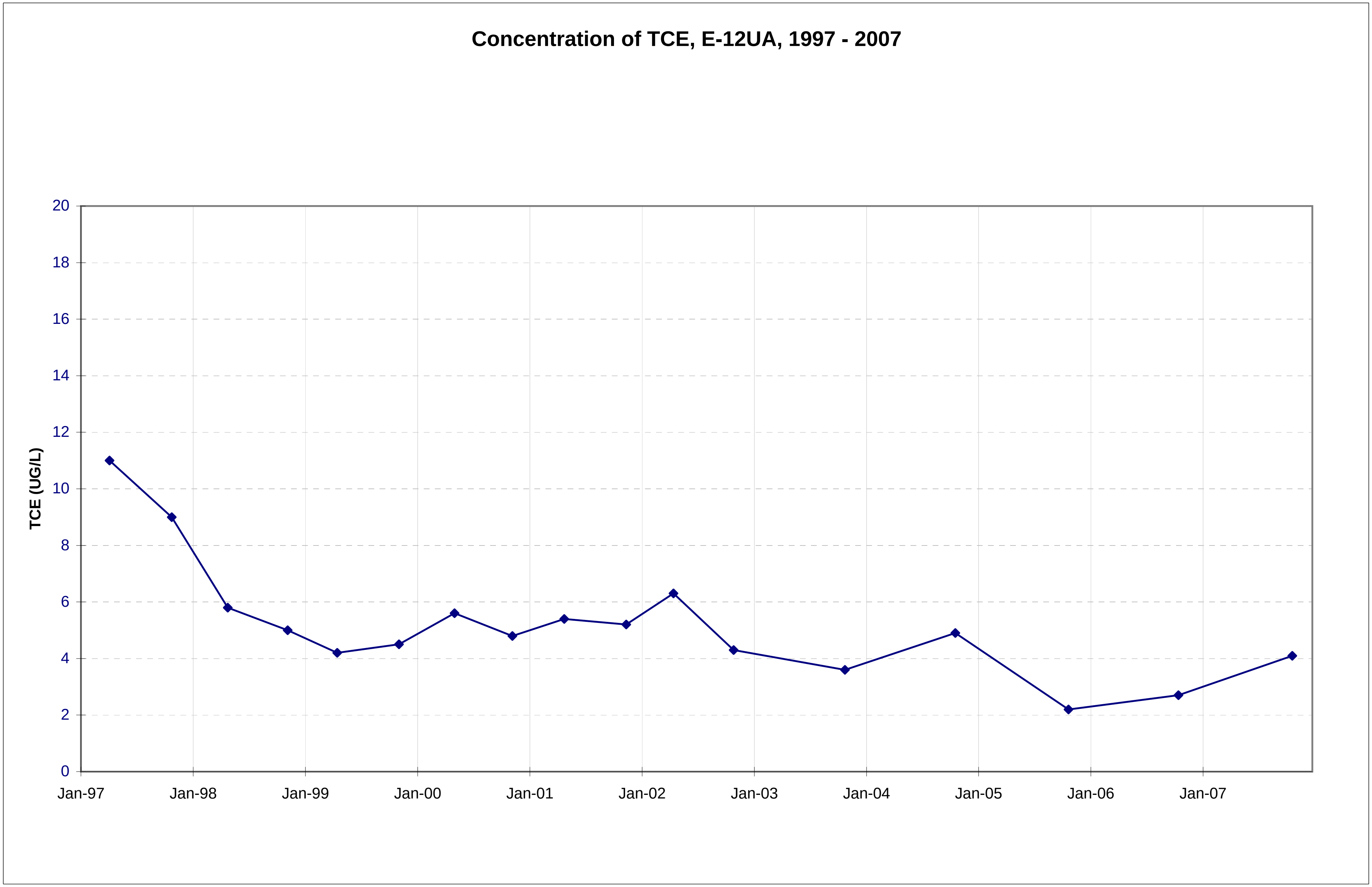
Concentration of TCE, E-8MA, 1997 - 2007
TCE (UG/L)
100
90
80
70
60
50
40
30
20
10
0
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07



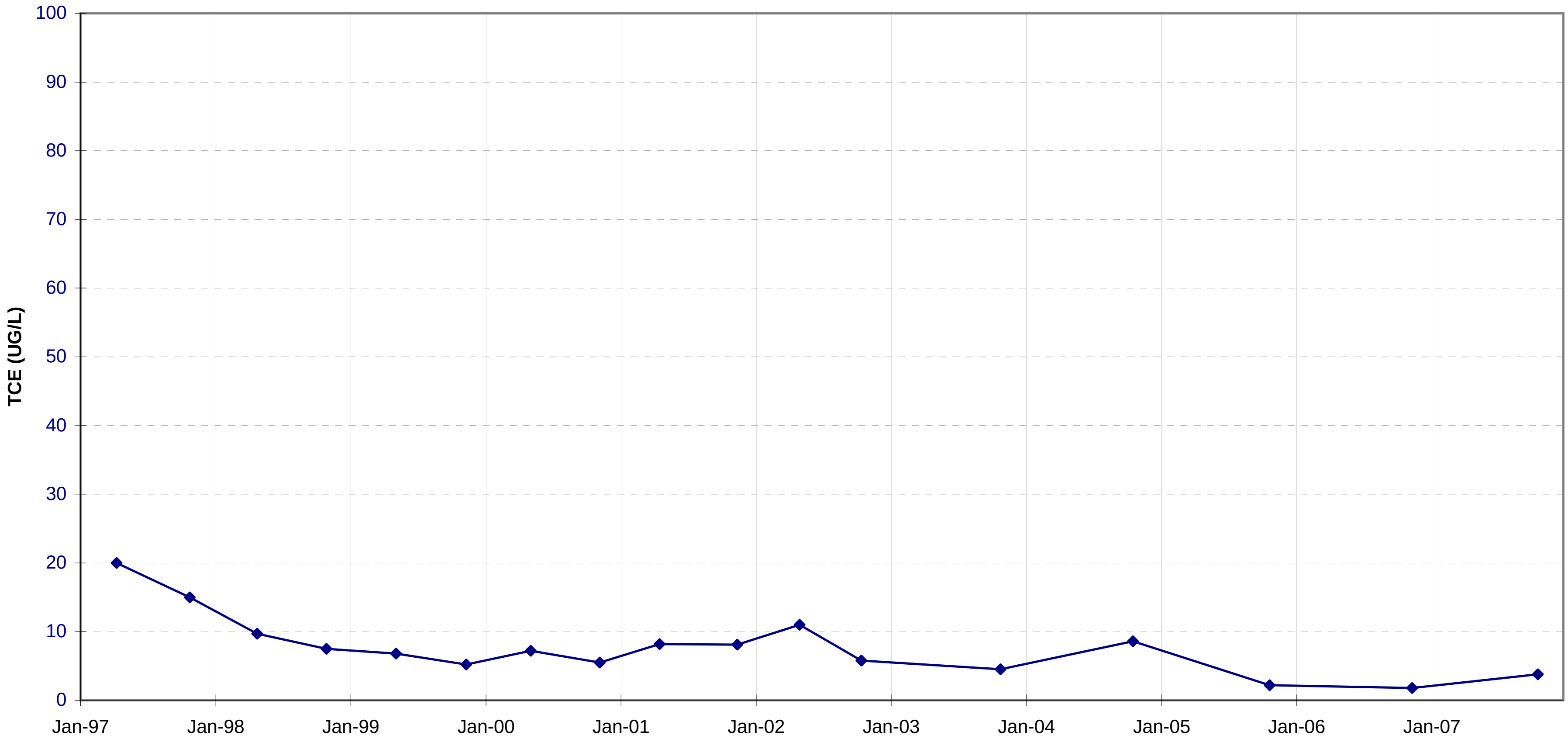
Concentration of TCE, E-9UA, 1997 - 2007
TCE (UG/L)
100
90
80
70
60
50
40
30
20
10
0
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07



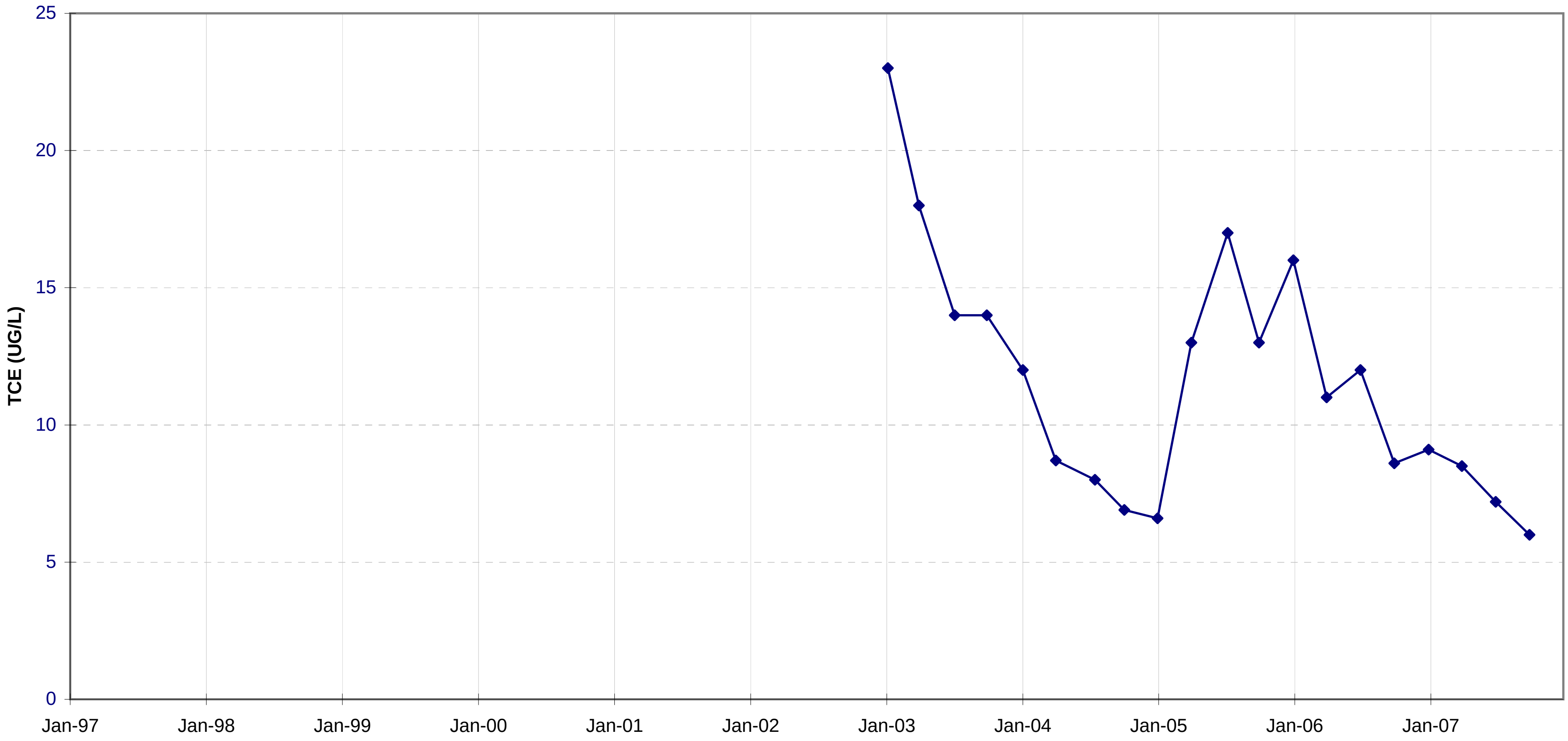
Concentration of TCE, E-10MA, 1997 - 2007
TCE (UG/L)
0
10
20
30
40
50
60
70
80
90
100
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

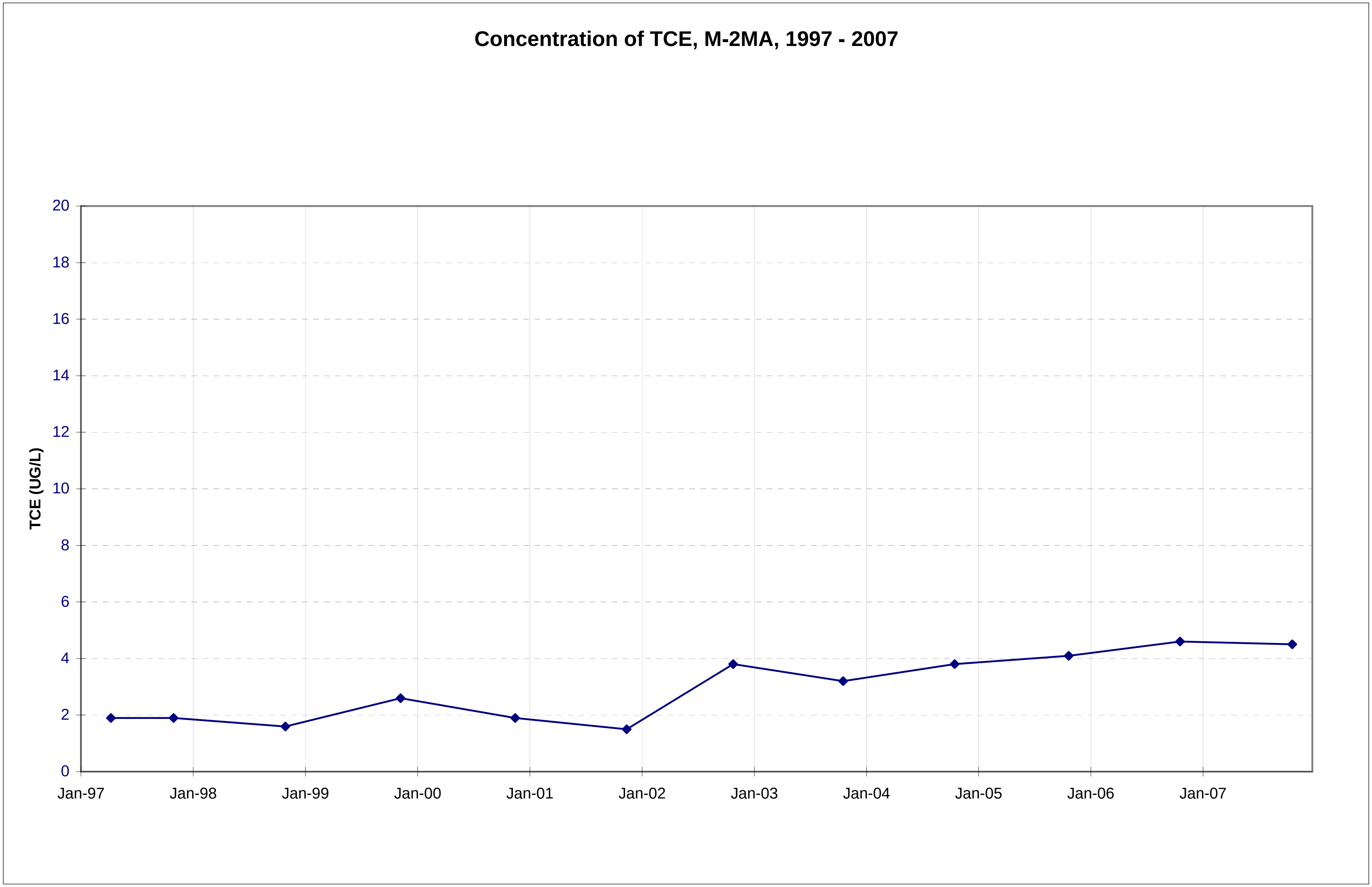

Concentration of TCE, E-12UA, 1997 - 2007
TCE (UG/L)
0
2
4
6
8
10
12
14
16
18
20
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

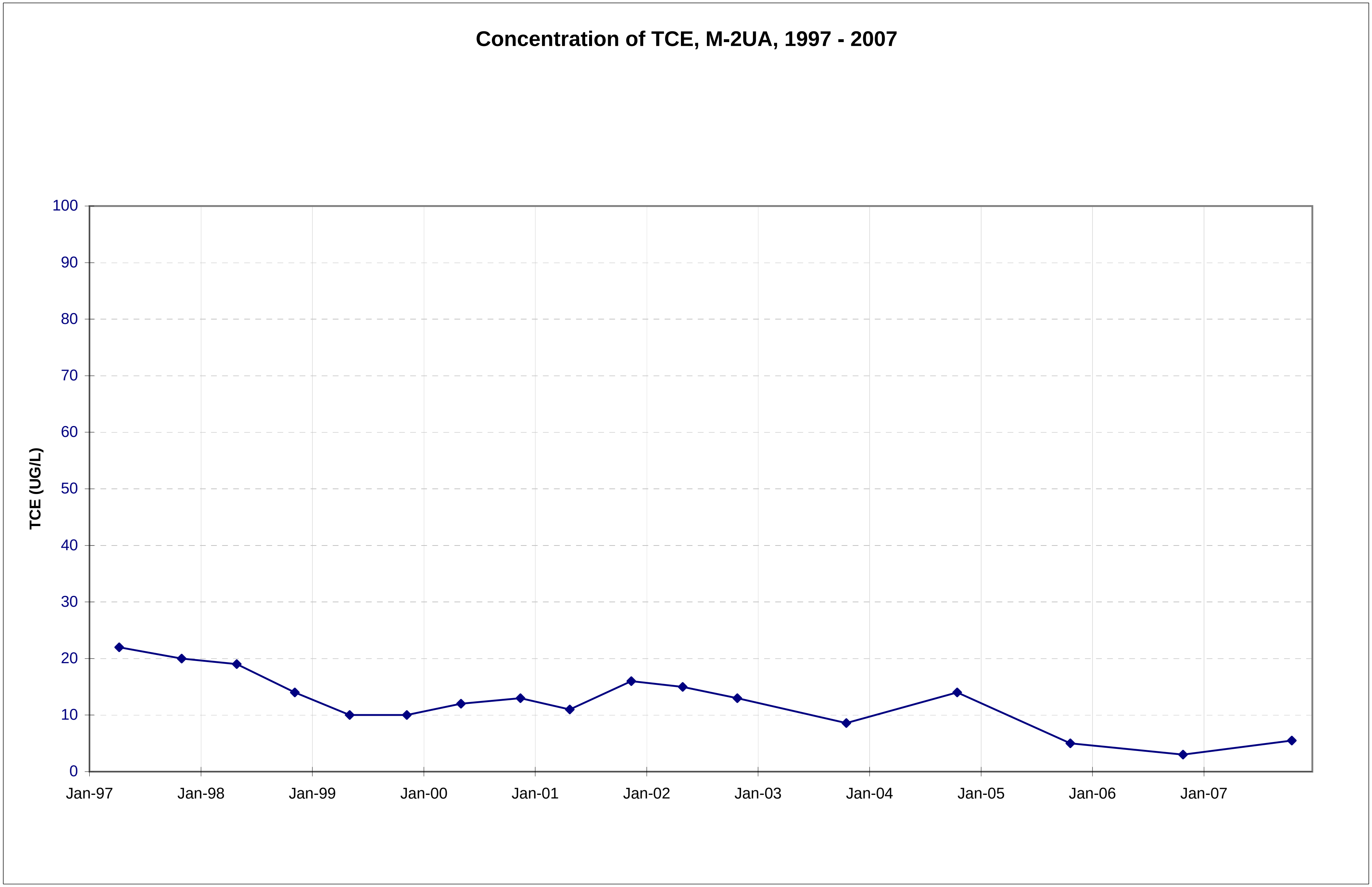
Concentration of TCE, E-13UA, 1997 - 2007



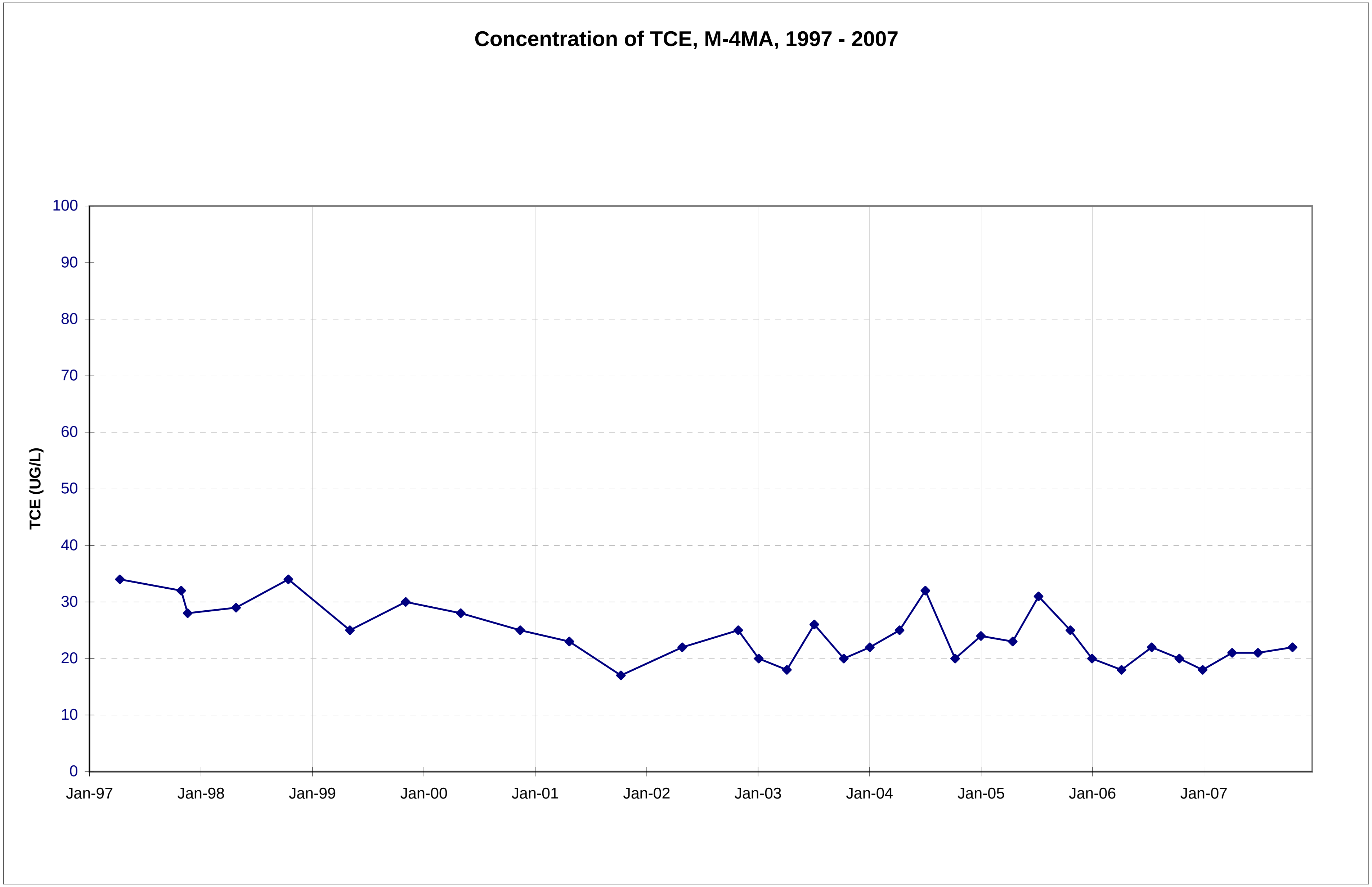
Concentration of TCE, 7EX-1UA, 1997 - 2007



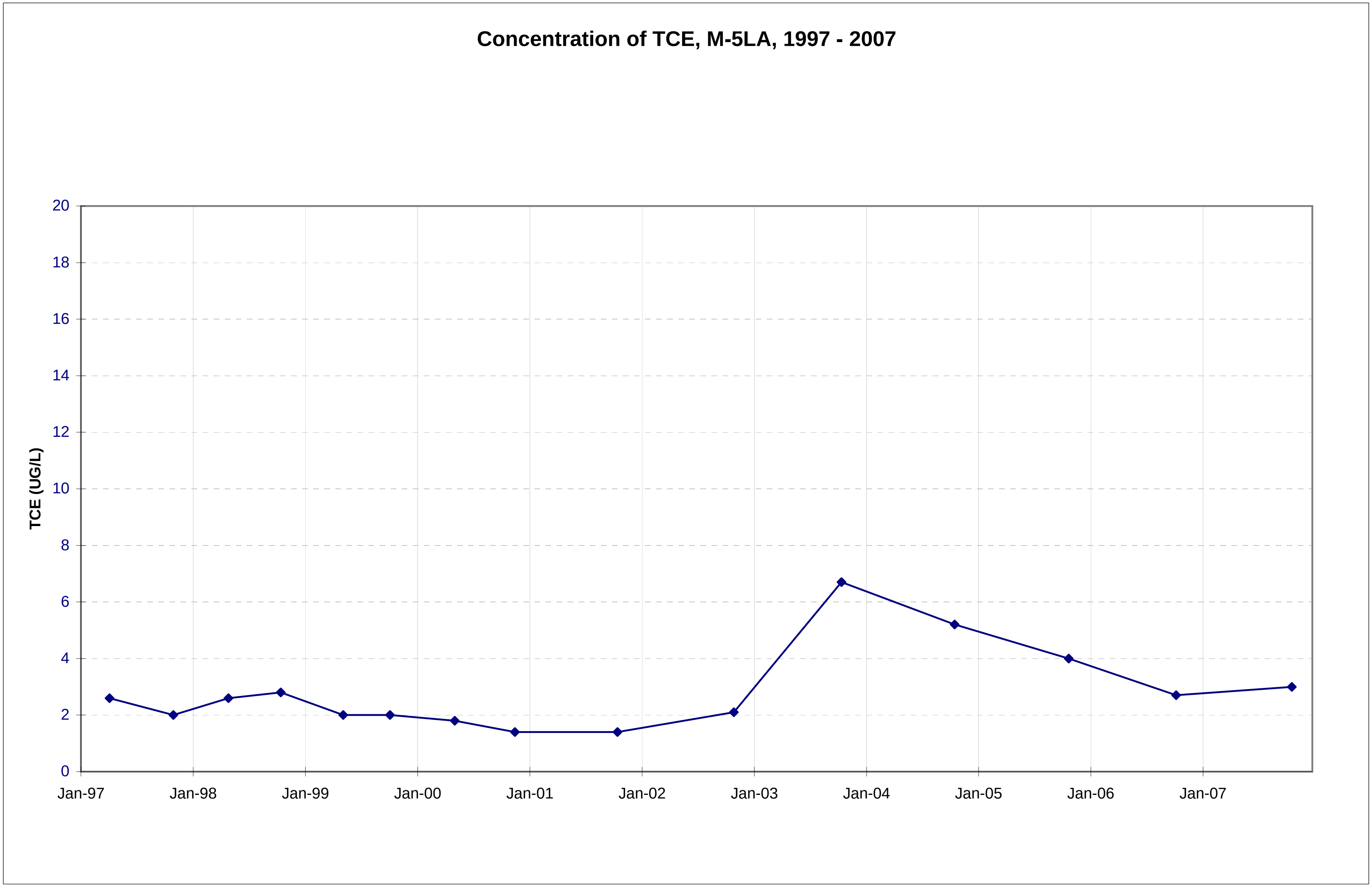

Concentration of TCE, M-2MA, 1997 - 2007
TCE (UG/L)
0
2
4
6
8
10
12
14
16
18
20
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

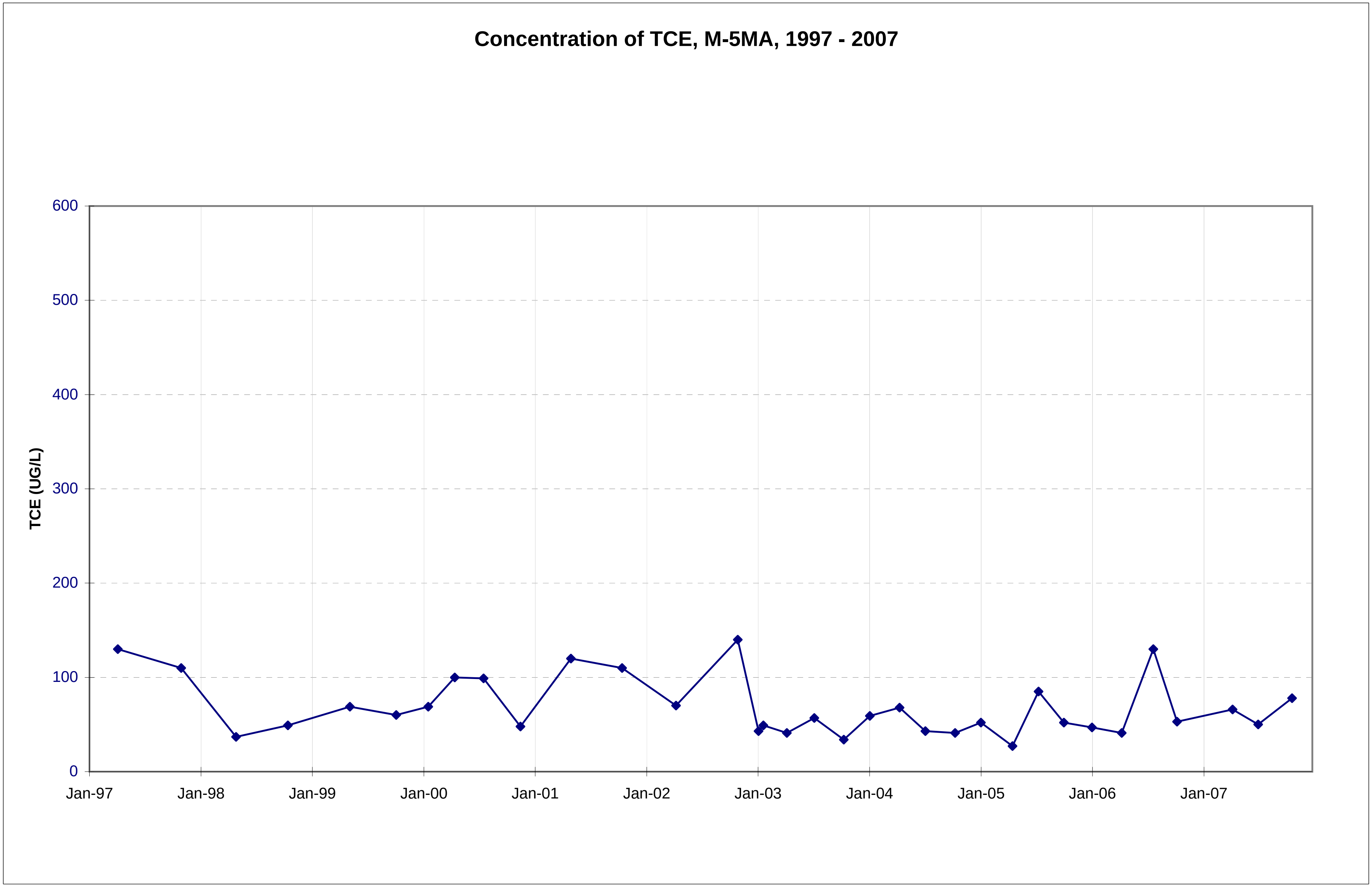


Concentration of TCE, M-2UA, 1997 - 2007
TCE (UG/L)
100
90
80
70
60
50
40
30
20
10
0
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

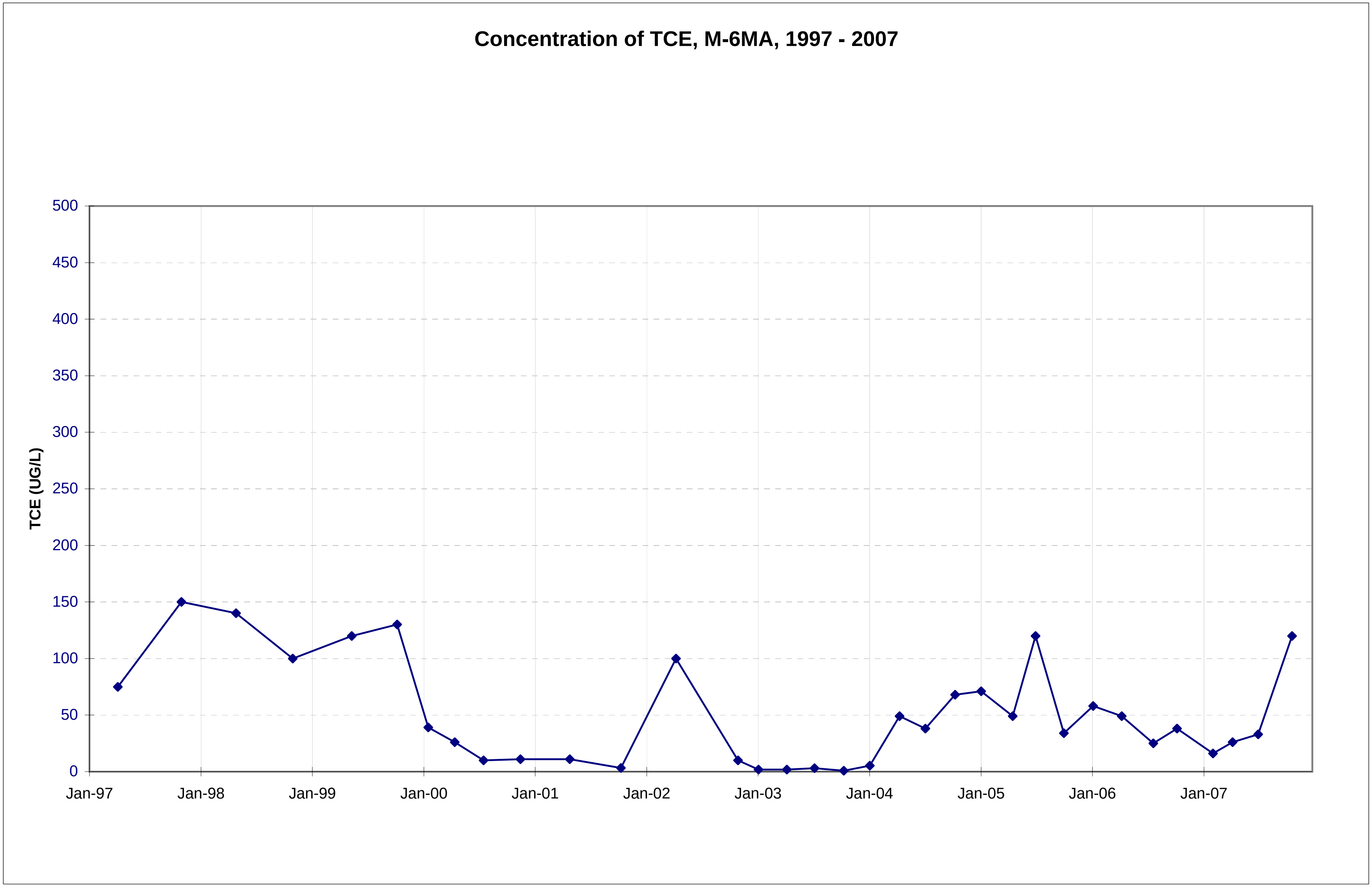


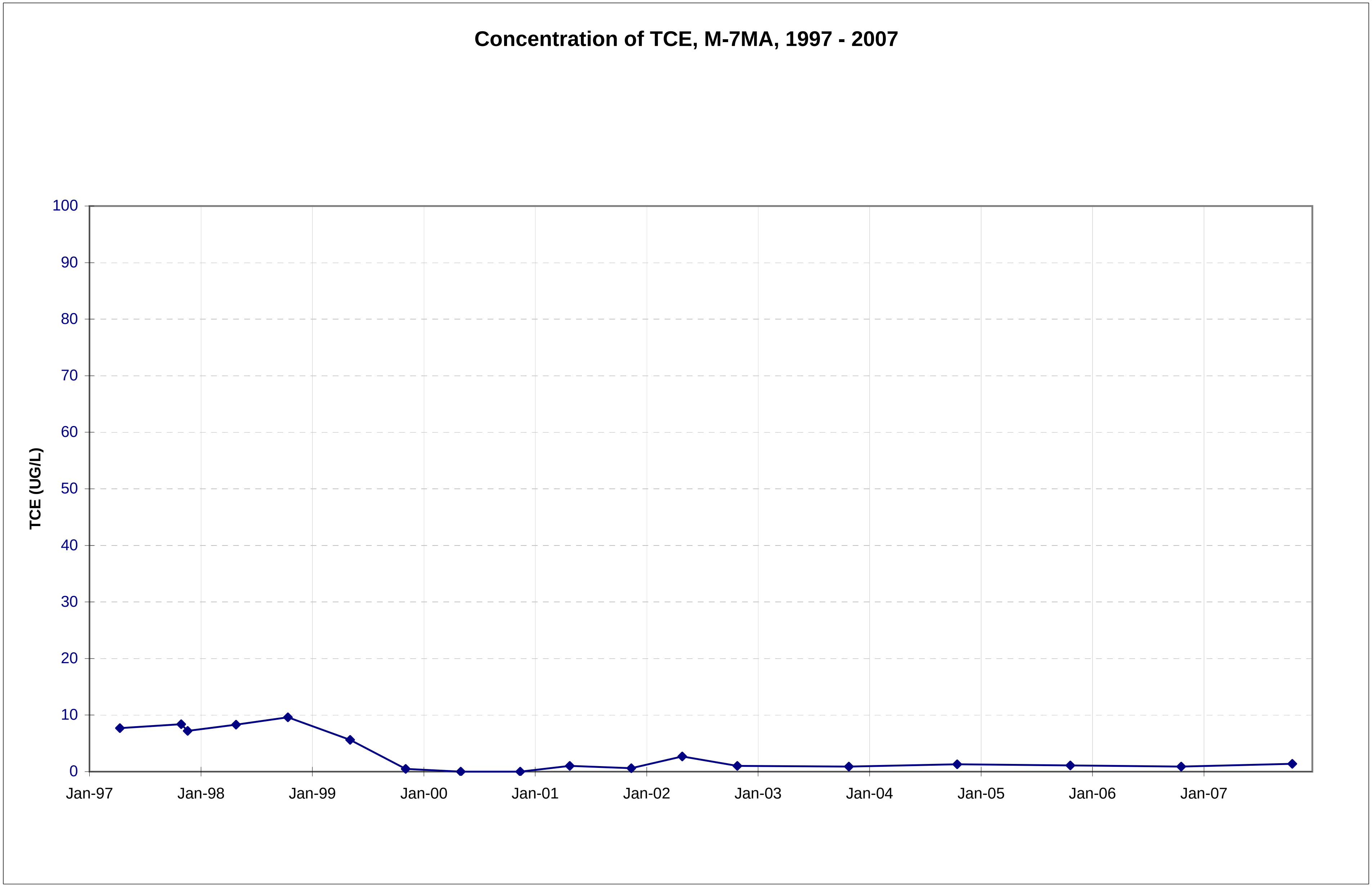
Concentration of TCE, M-4MA, 1997 - 2007
TCE (UG/L)
100
90
80
70
60
50
40
30
20
10
0
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07


Concentration of TCE, M-5LA, 1997 - 2007
TCE (UG/L)
20
18
16
14
12
10
8
6
4
2
0
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07



Concentration of TCE, M-5MA, 1997 - 2007
TCE (UG/L)
600
500
400
300
200
100
0
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07


Concentration of TCE, M-6MA, 1997 - 2007
TCE (UG/L)
500
450
400
350
300
250
200
150
100
50
0
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07



Concentration of TCE, M-7MA, 1997 - 2007
TCE (UG/L)
100
90
80
70
60
50
40
30
20
10
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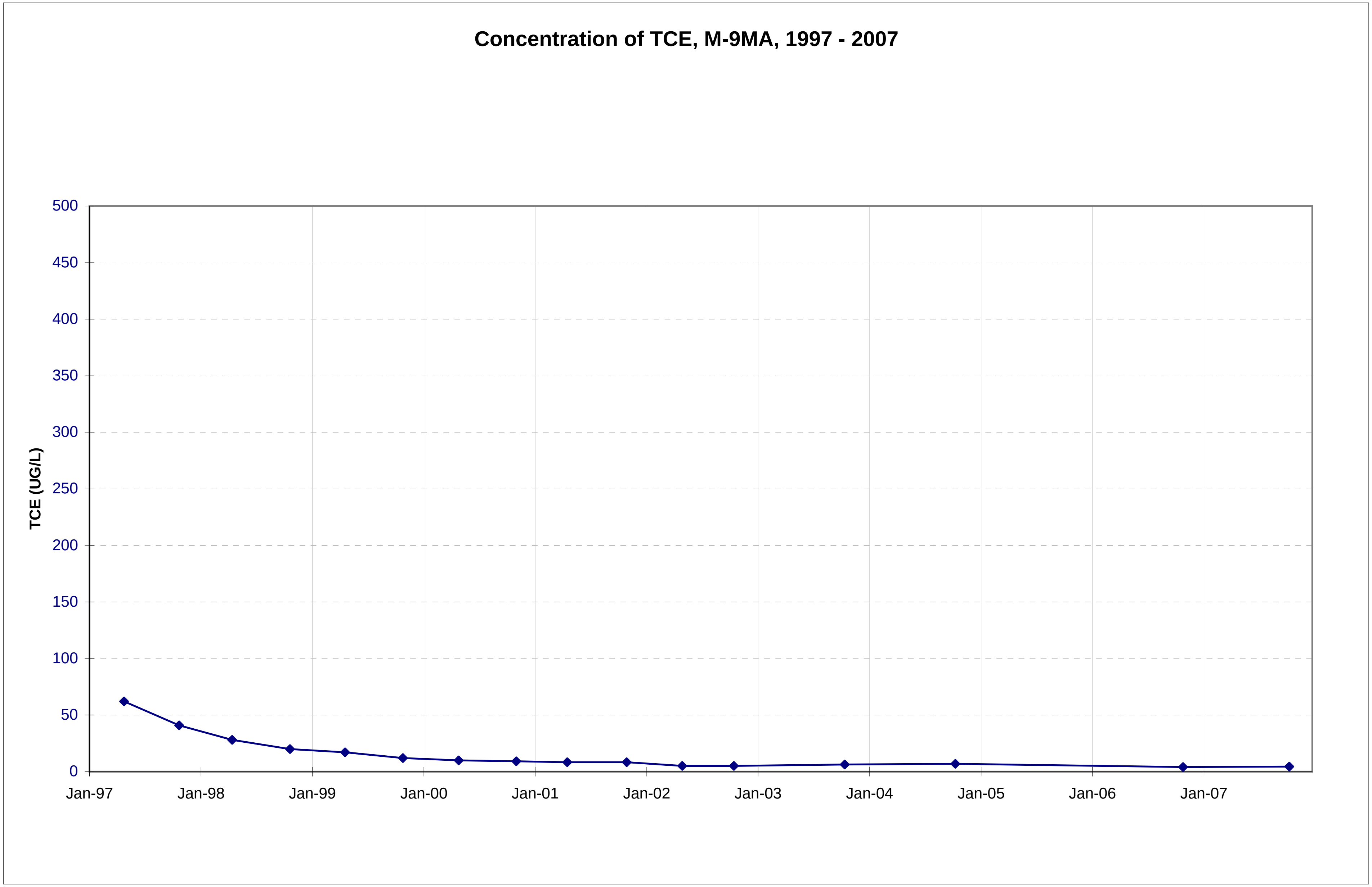
Jan-07



Concentration of TCE, M-9MA, 1997 - 2007
TCE (UG/L)
500
450
400
350
300
250
200
150
100
50
0
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Jan-01
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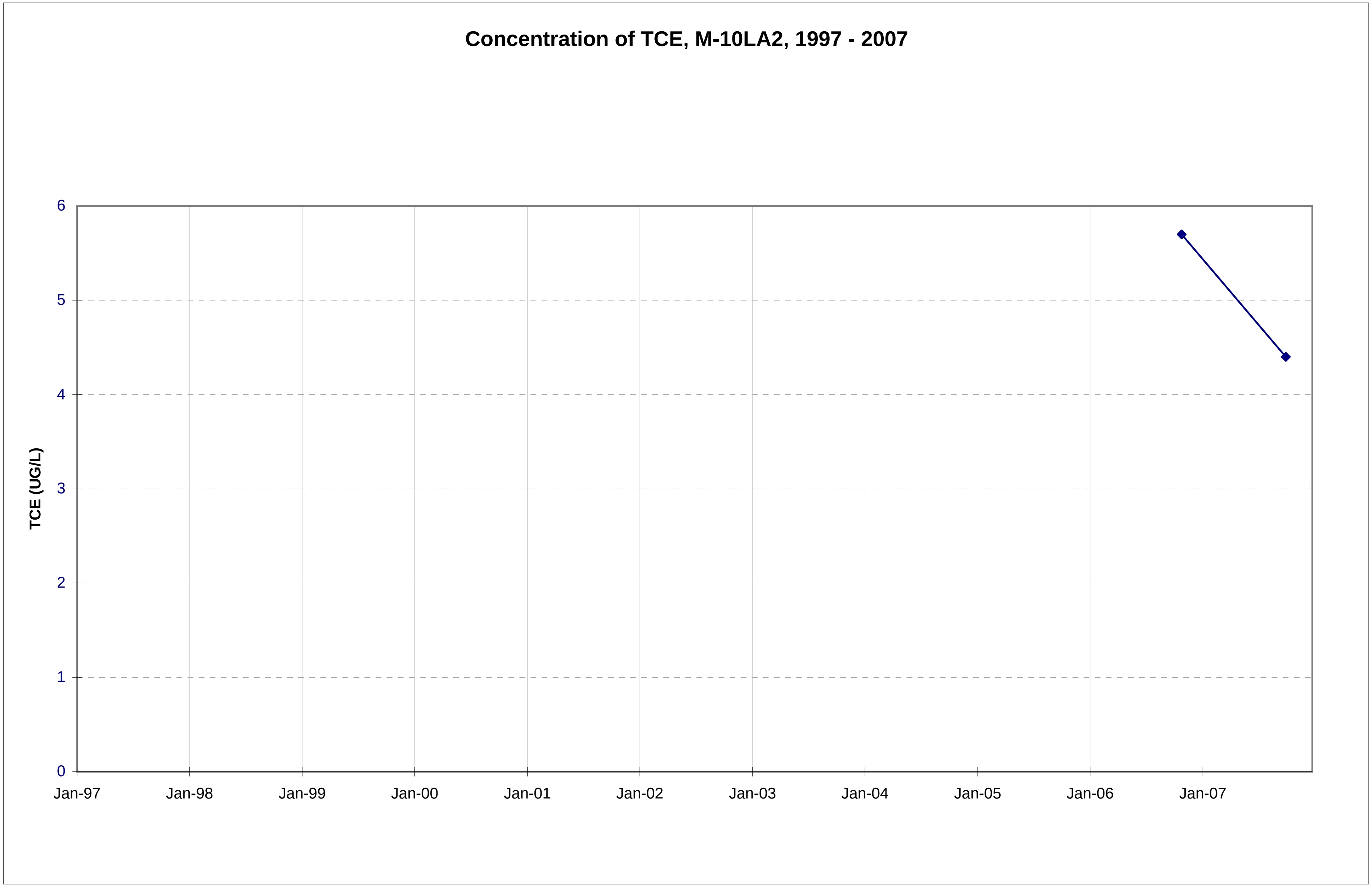
Jan-07


Concentration of TCE, M-10LA2, 1997 - 2007
TCE (UG/L)
0
1
2
3
4
5
6
Jan-97
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Jan-99
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Jan-01
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Jan-03
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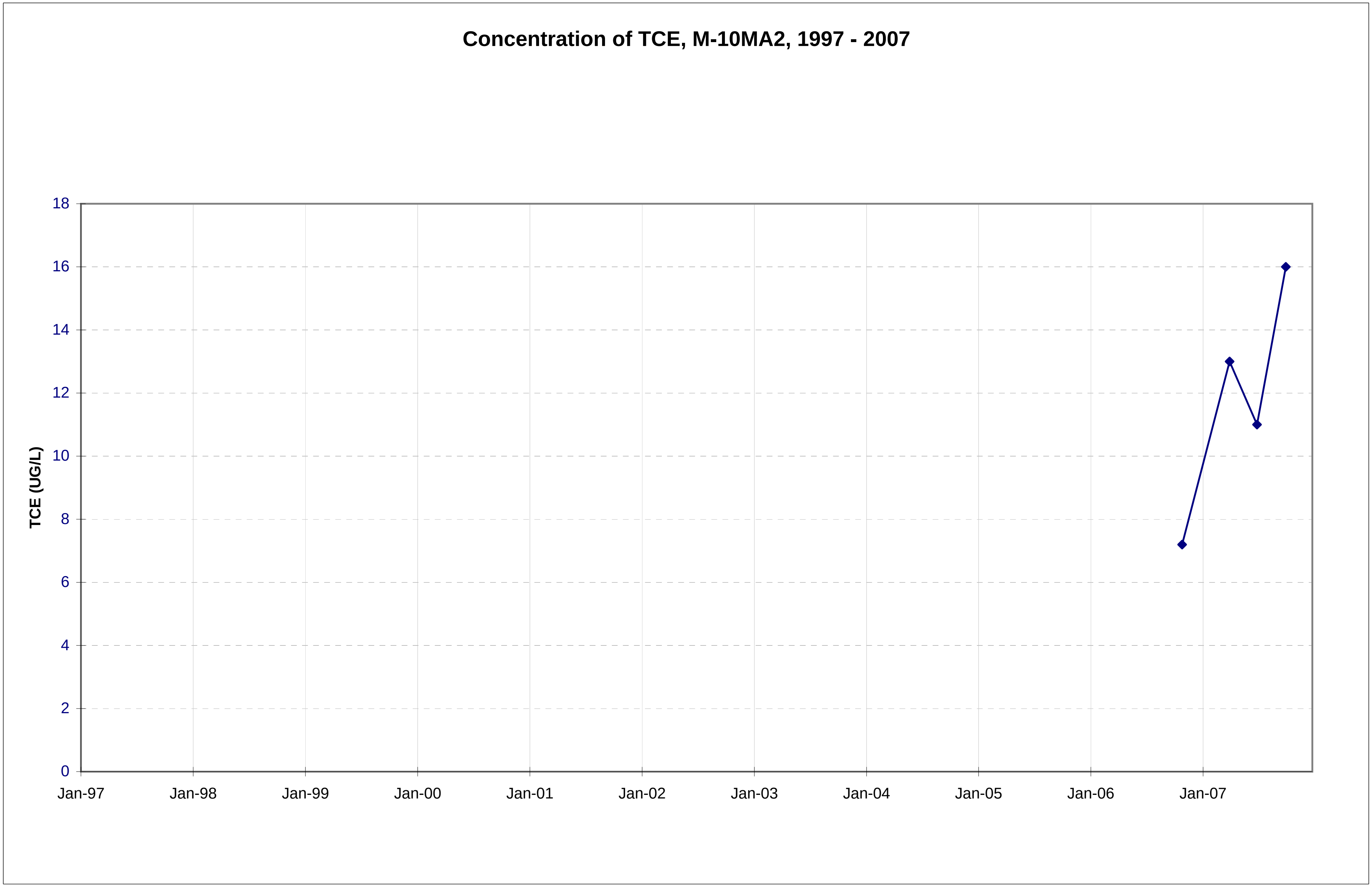
Jan-05
Jan-06
Jan-07


Concentration of TCE, M-10MA2, 1997 - 2007
TCE (UG/L)
0
2
4
6
8
10
12
14
16
18
Jan-97
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Jan-99
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Jan-01
Jan-02
Jan-03
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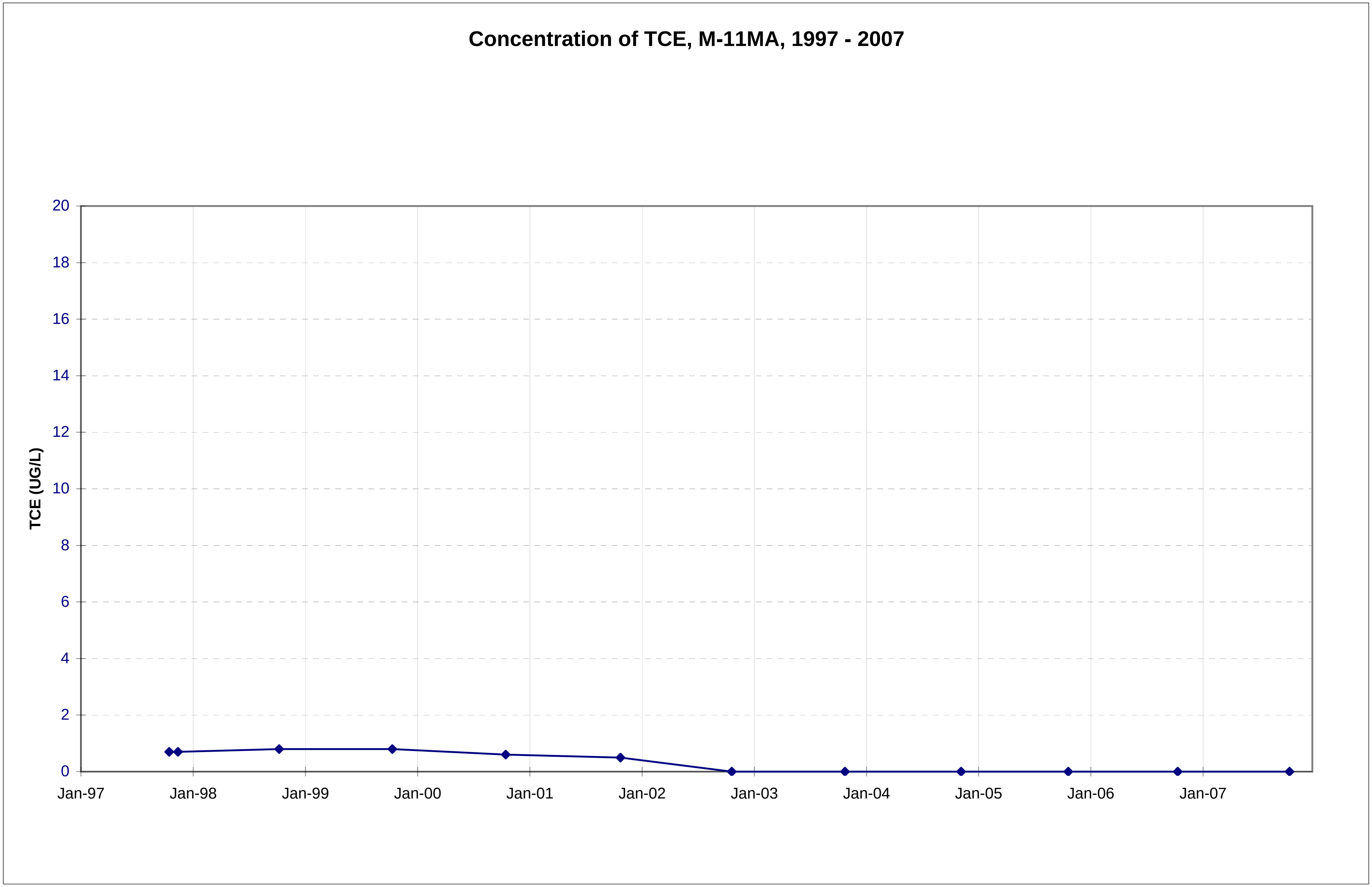
Jan-07



Concentration of TCE, M-11MA, 1997 - 2007
TCE (UG/L)
20
18
16
14
12
10
8
6
4
2
0
Jan-97
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Jan-99
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Jan-01
Jan-02
Jan-03
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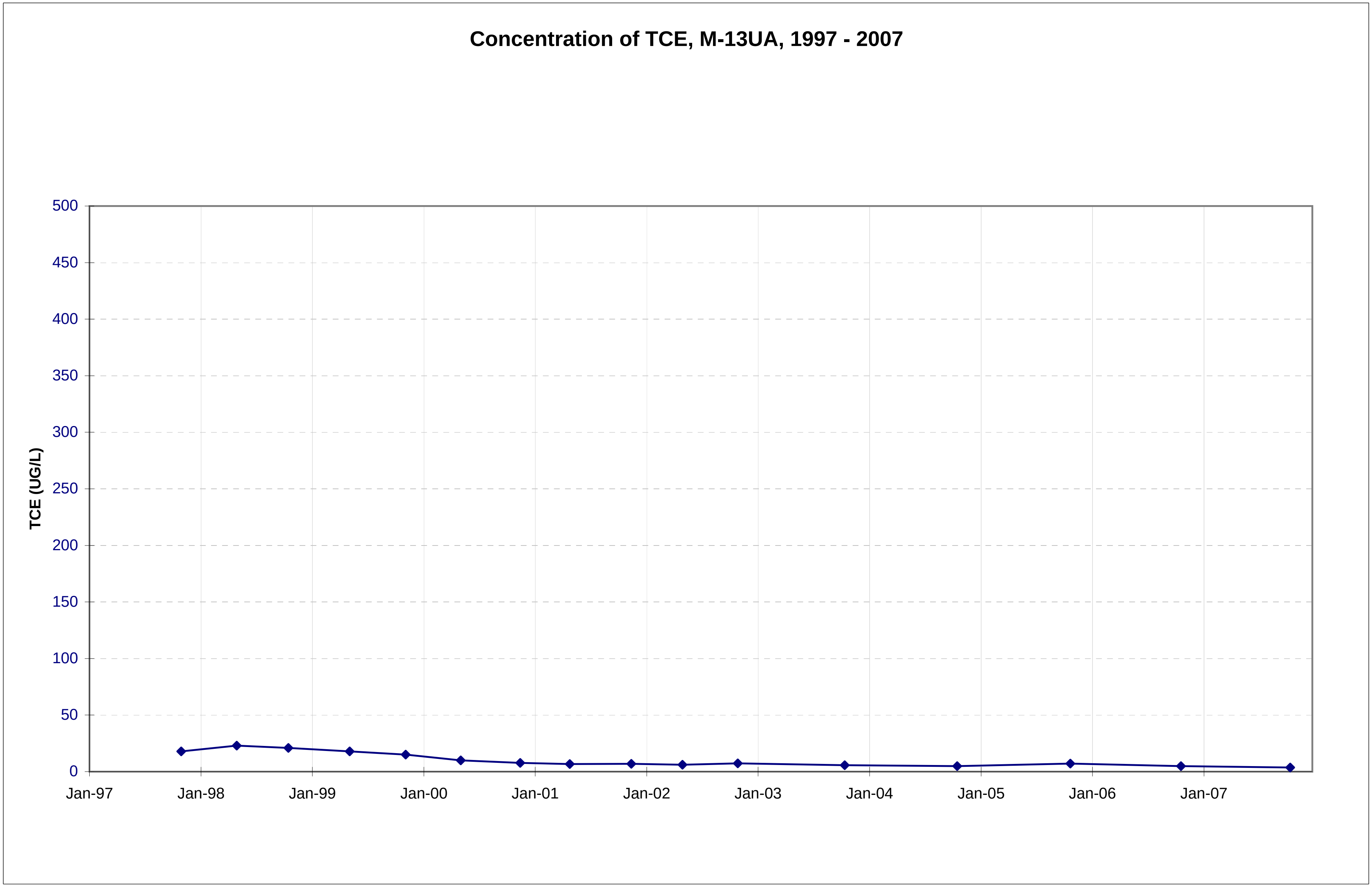
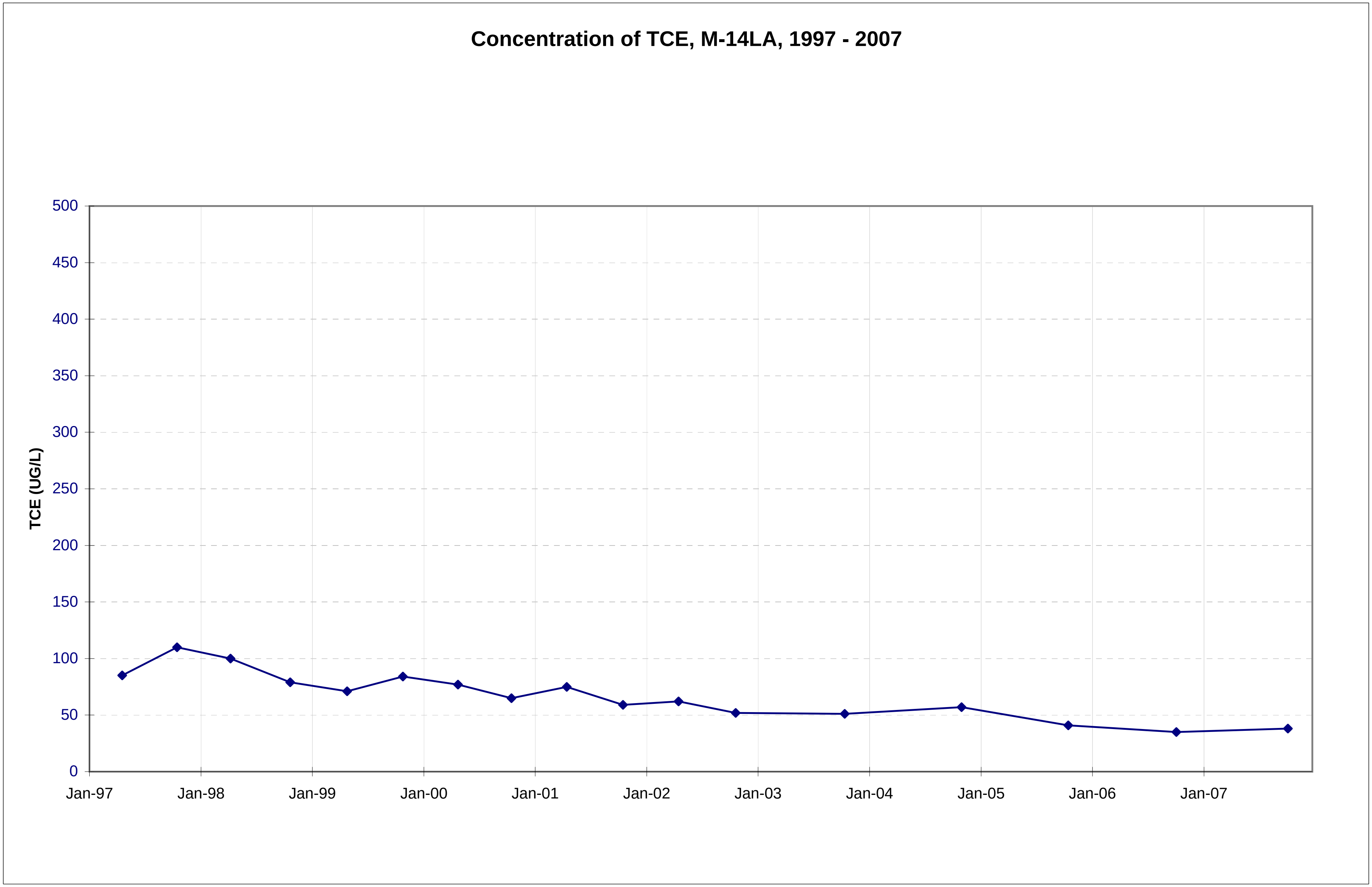
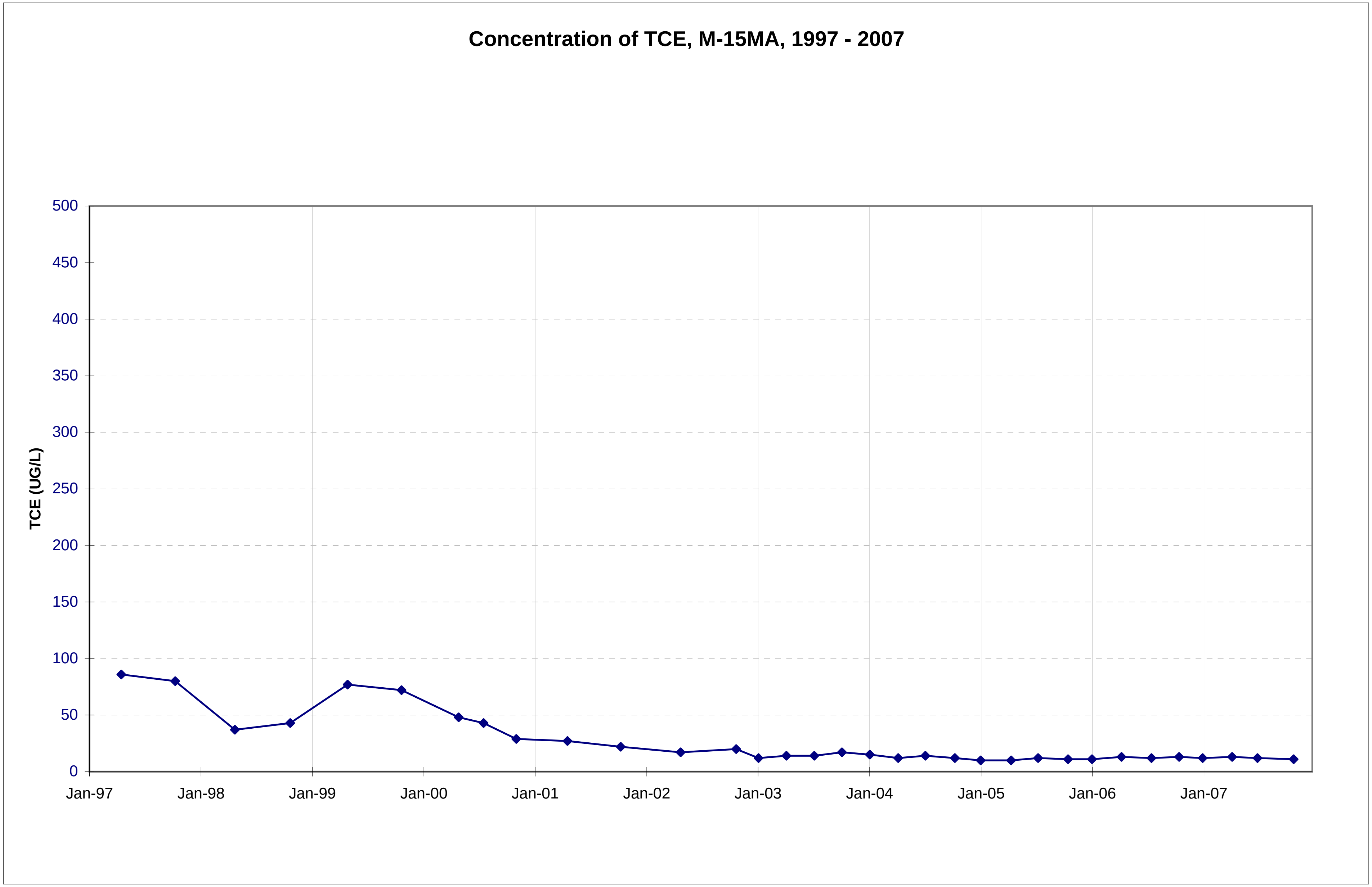
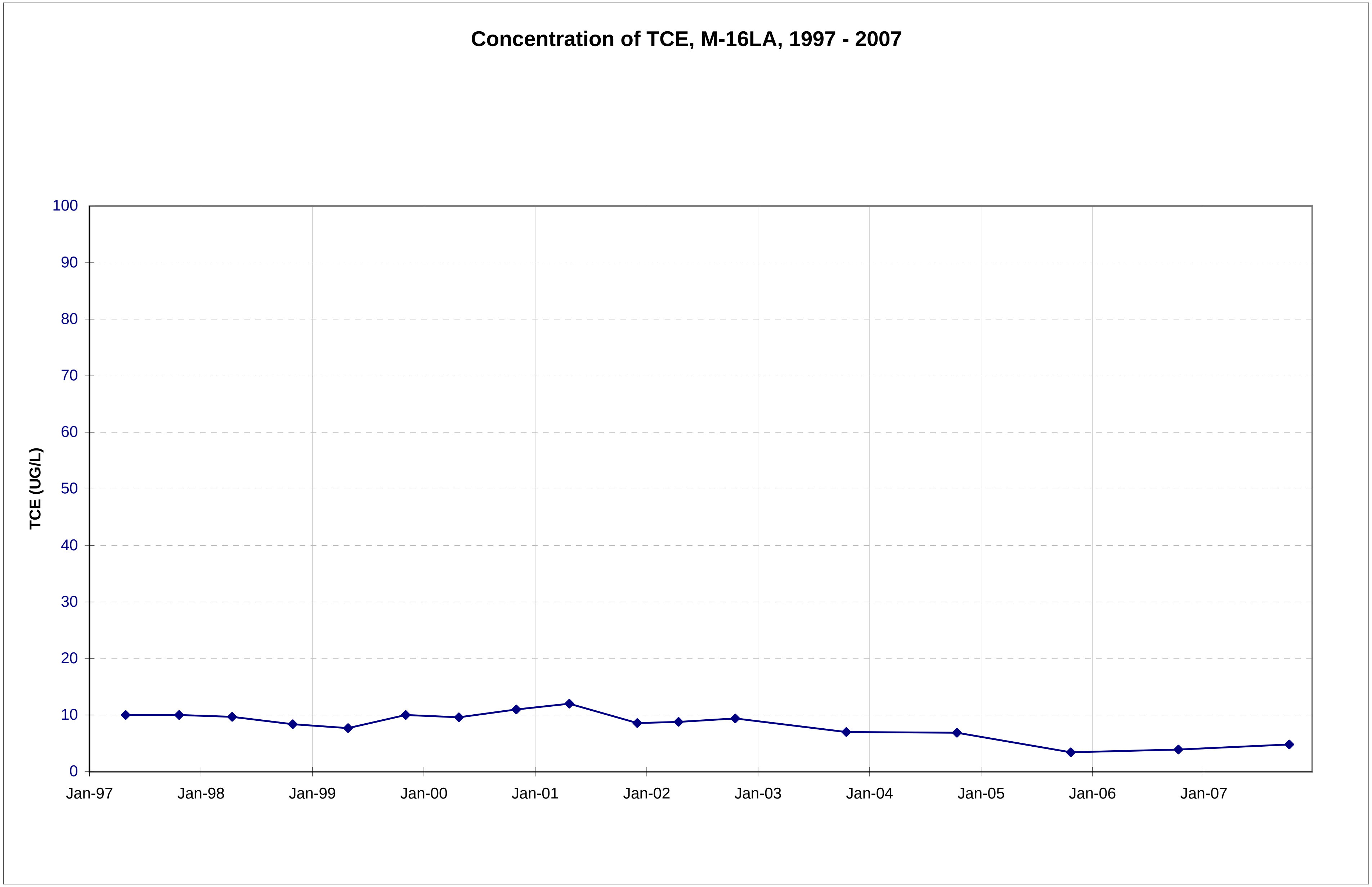
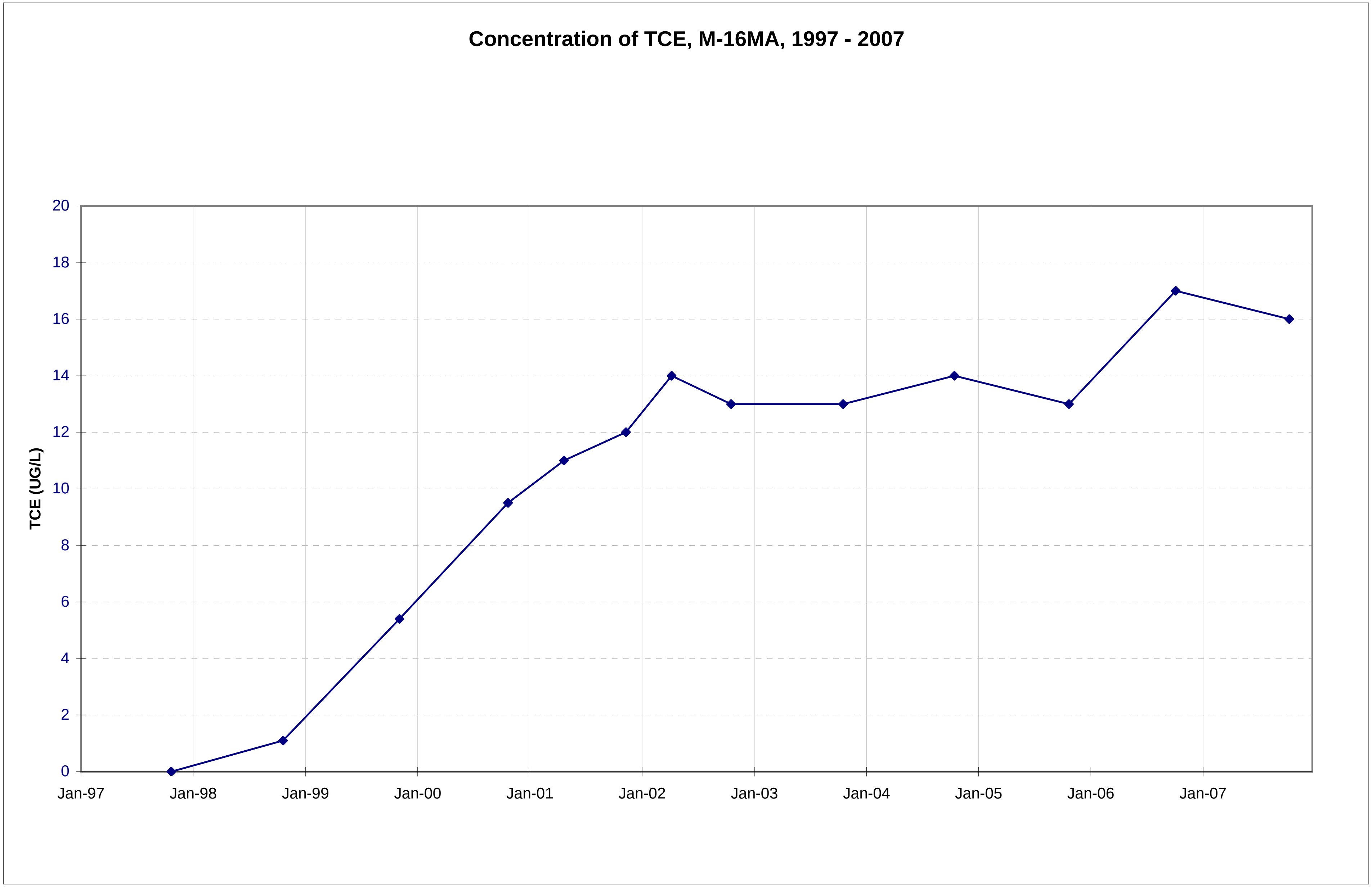
Jan-07


Concentration of TCE, M-13UA, 1997 - 2007
TCE (UG/L)
500
450
400
350
300
250
200
150
100
50
0
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07


Concentration of TCE, M-14LA, 1997 - 2007
TCE (UG/L)
500
450
400
350
300
250
200
150
100
50
0
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07


Concentration of TCE, M-15MA, 1997 - 2007
TCE (UG/L)
500
450
400
350
300
250
200
150
100
50
0
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07


Concentration of TCE, M-16LA, 1997 - 2007
TCE (UG/L)
100
90
80
70
60
50
40
30
20
10
0
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07


Concentration of TCE, M-16MA, 1997 - 2007
TCE (UG/L)
0
2
4
6
8
10
12
14
16
18
20
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
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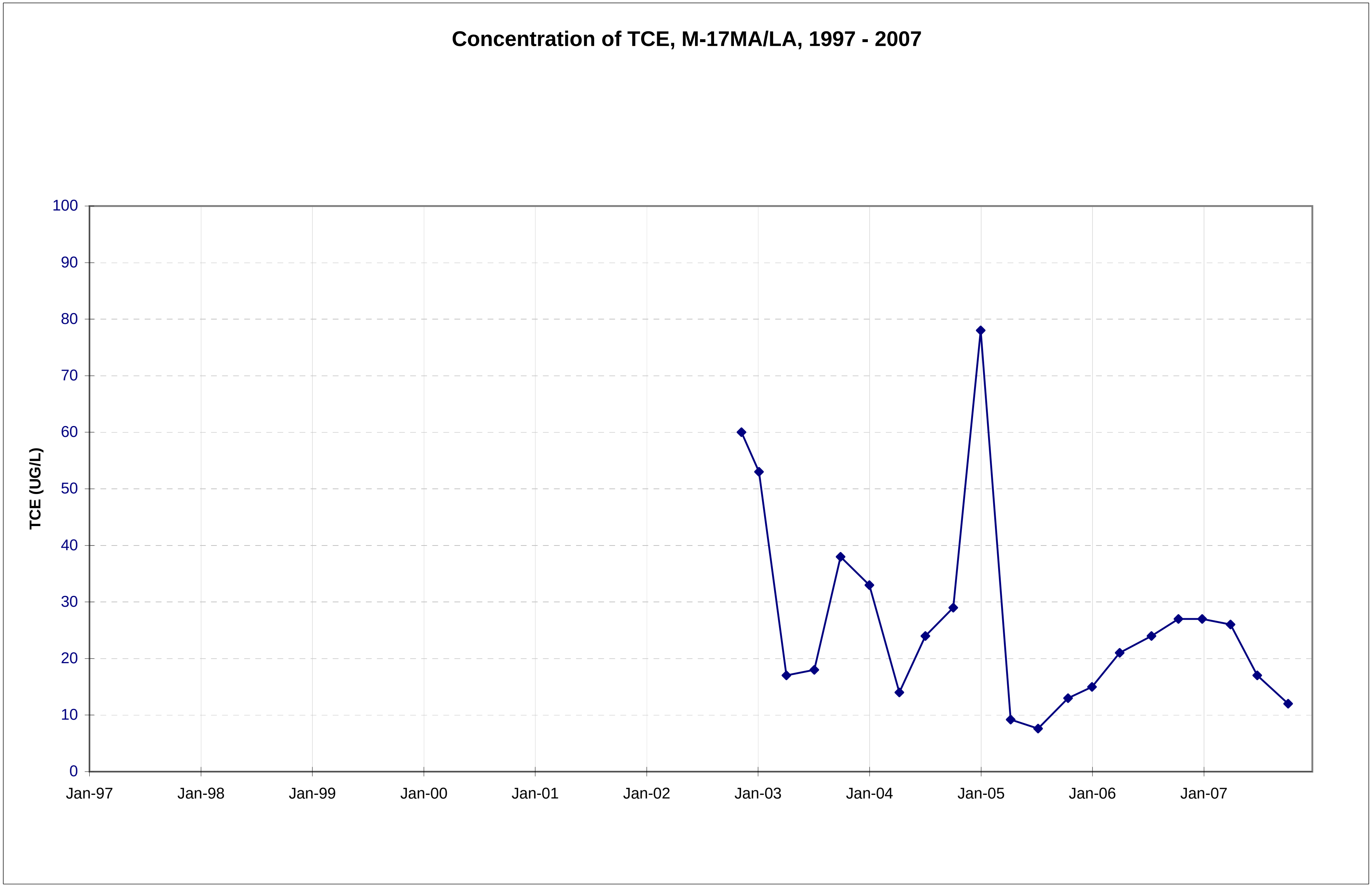
Jan-05
Jan-06
Jan-07


Concentration of TCE, M-17MA/LA, 1997 - 2007
TCE (UG/L)
100
90
80
70
60
50
40
30
20
10
0
Jan-97
Jan-98
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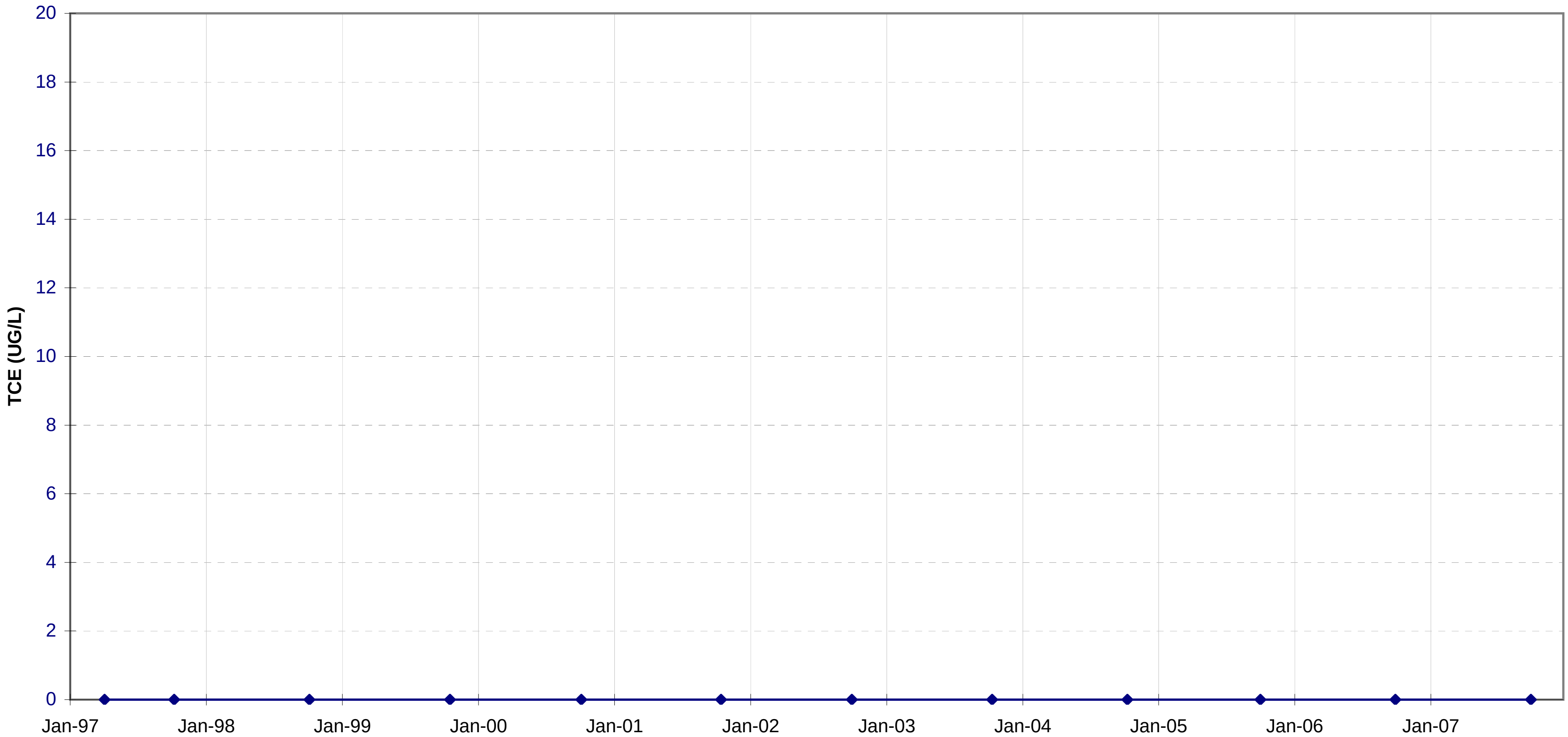
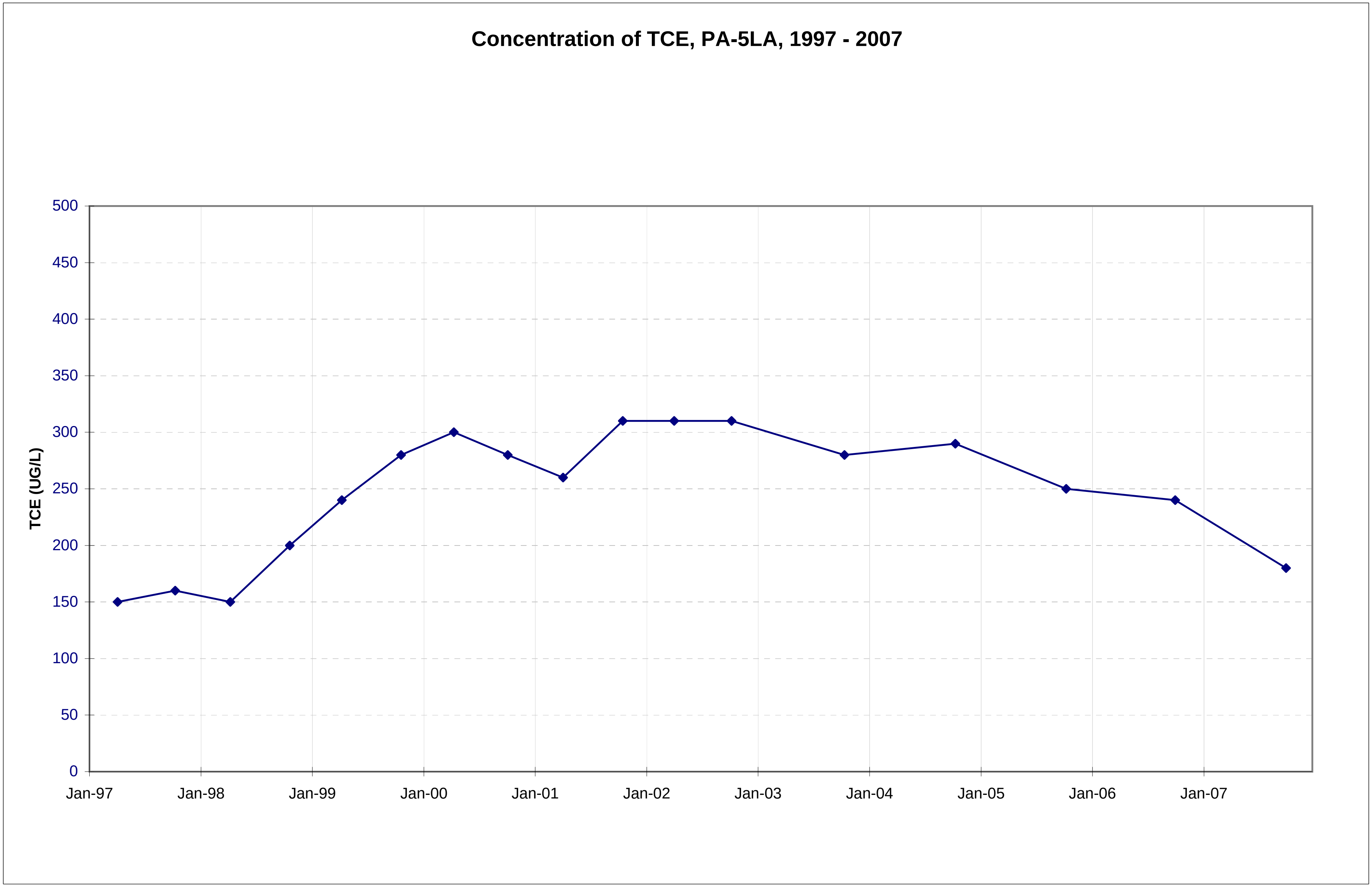
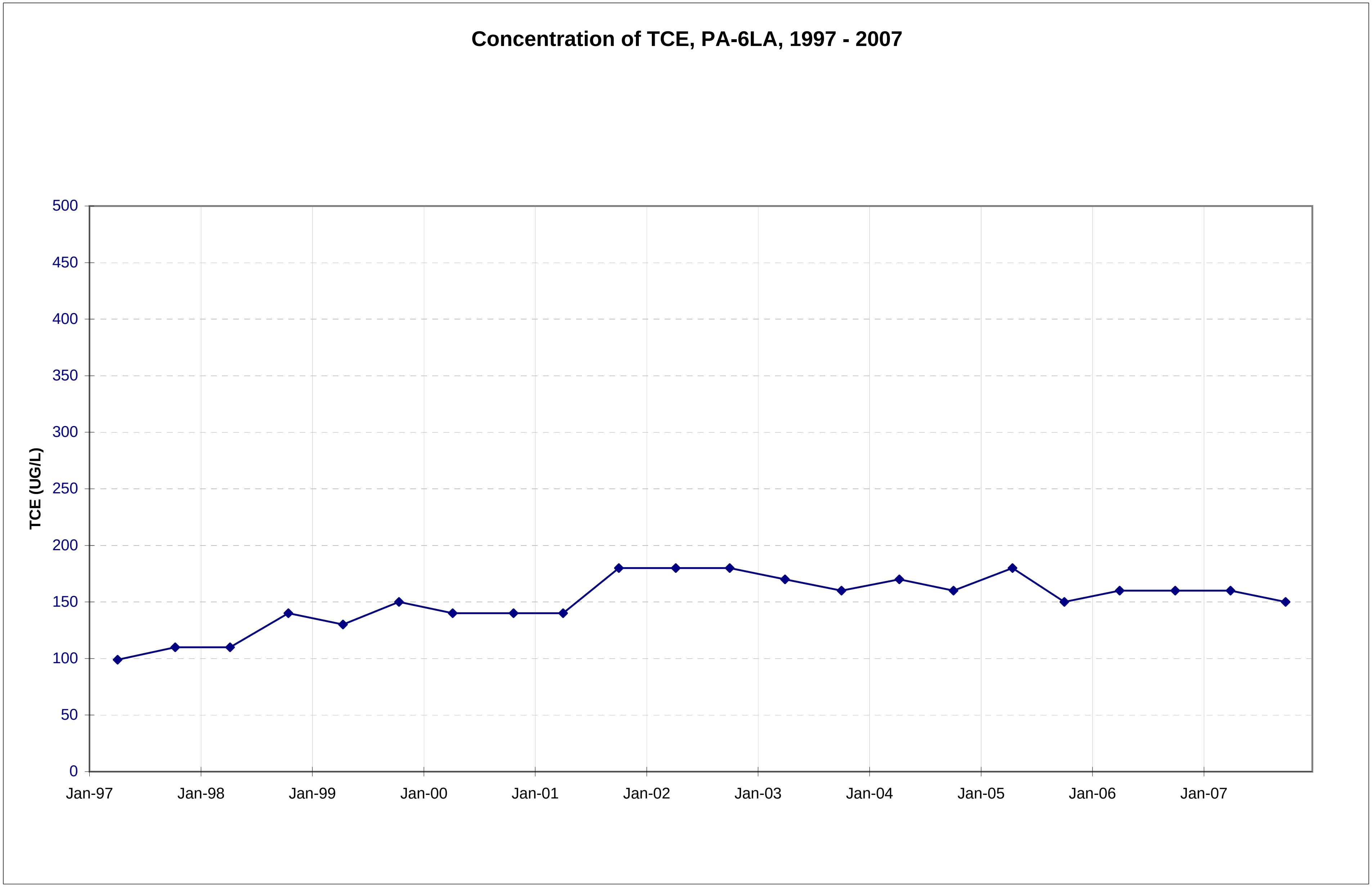
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

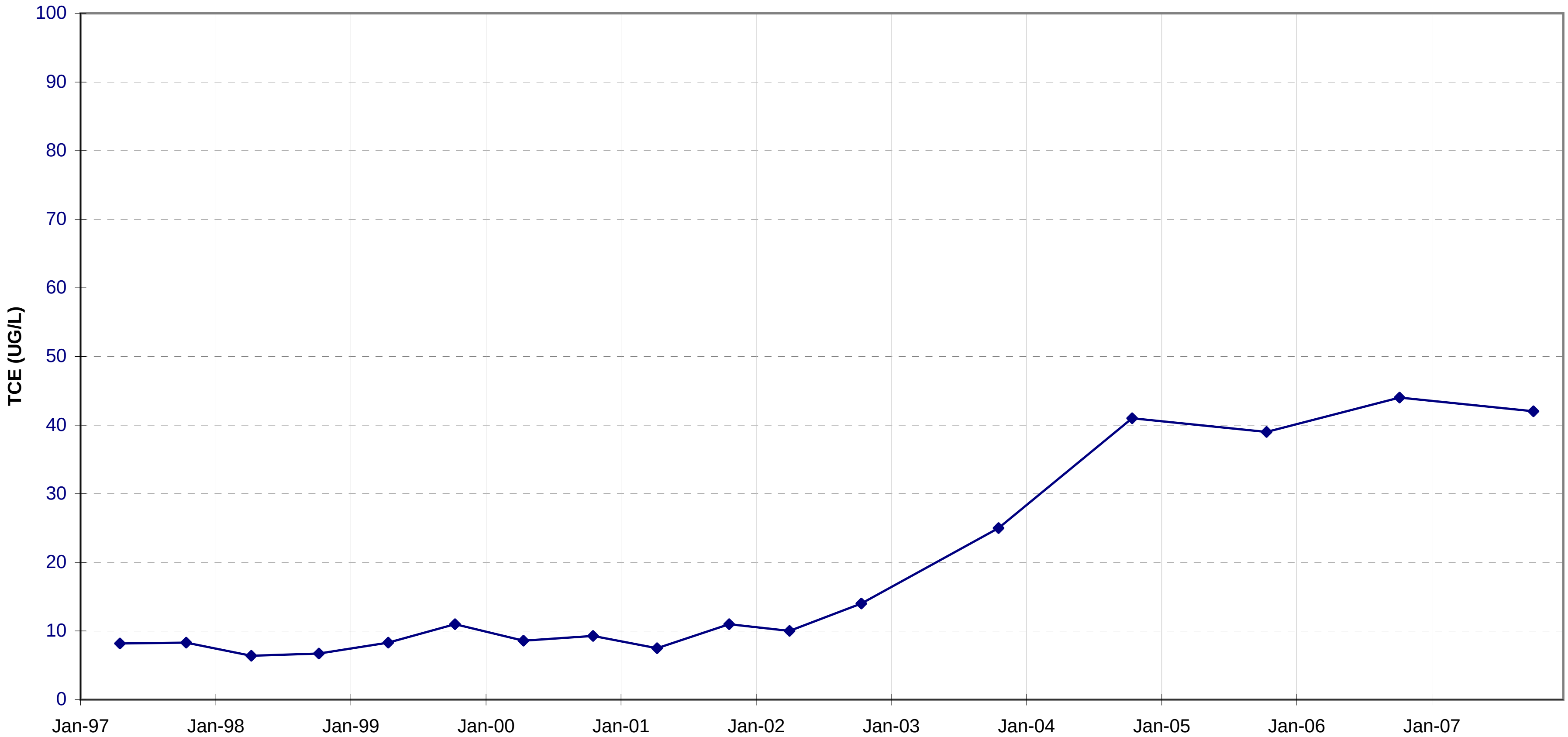
Concentration of TCE, PA-2LA, 1997 - 2007

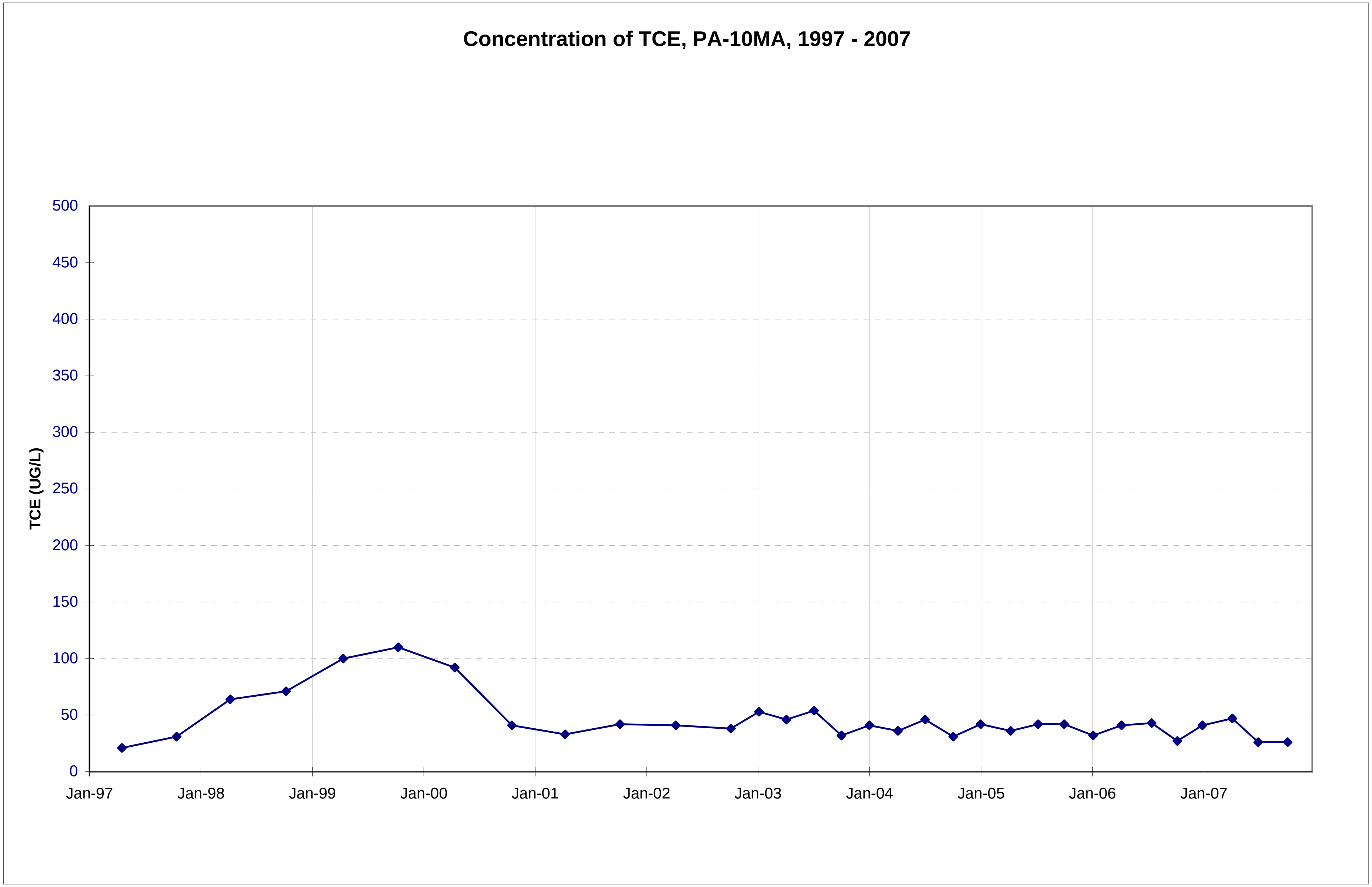


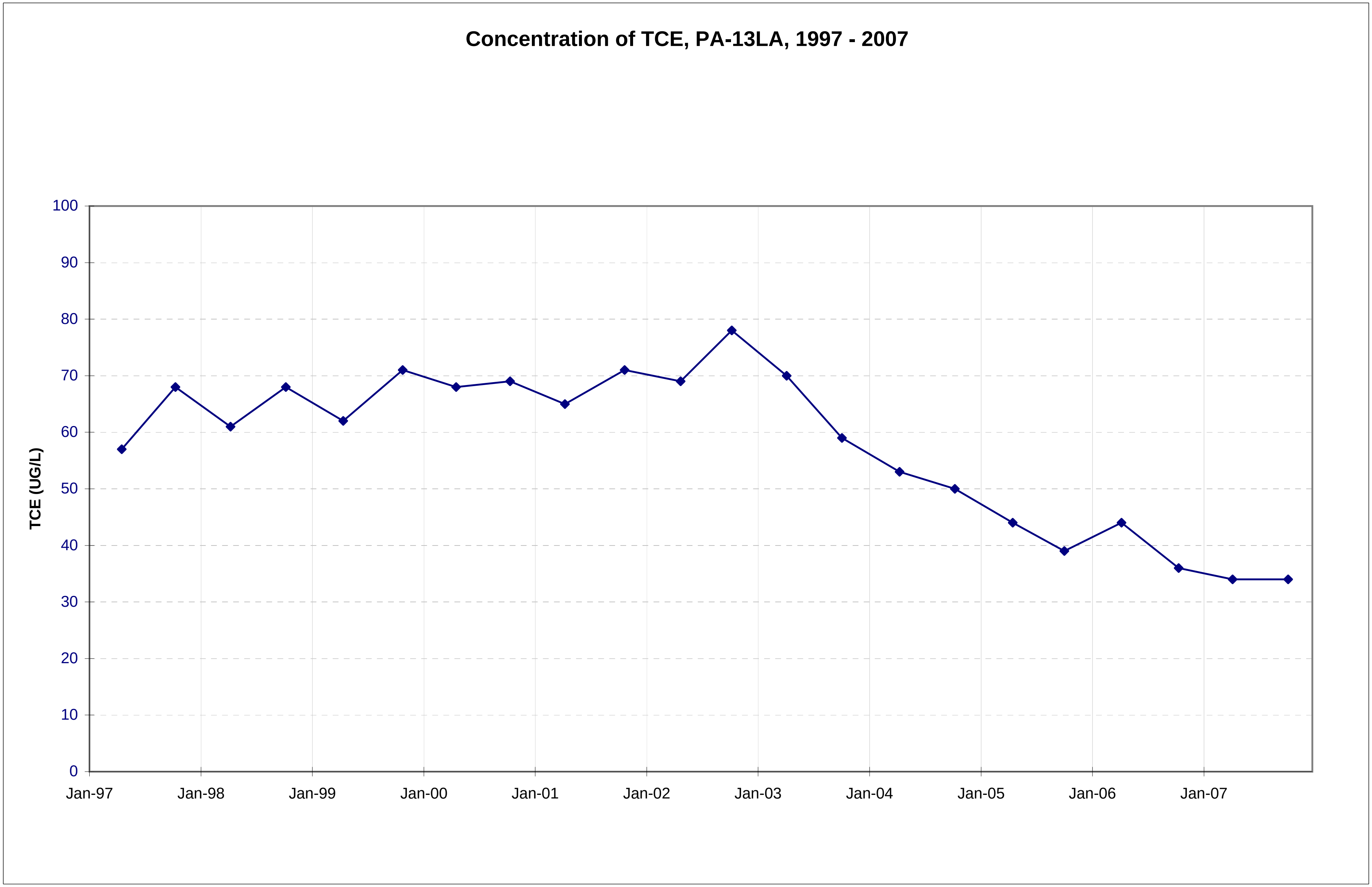

Concentration of TCE, PA-5LA, 1997 - 2007
TCE (UG/L)
500
450
400
350
300
250
200
150
100
50
0
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

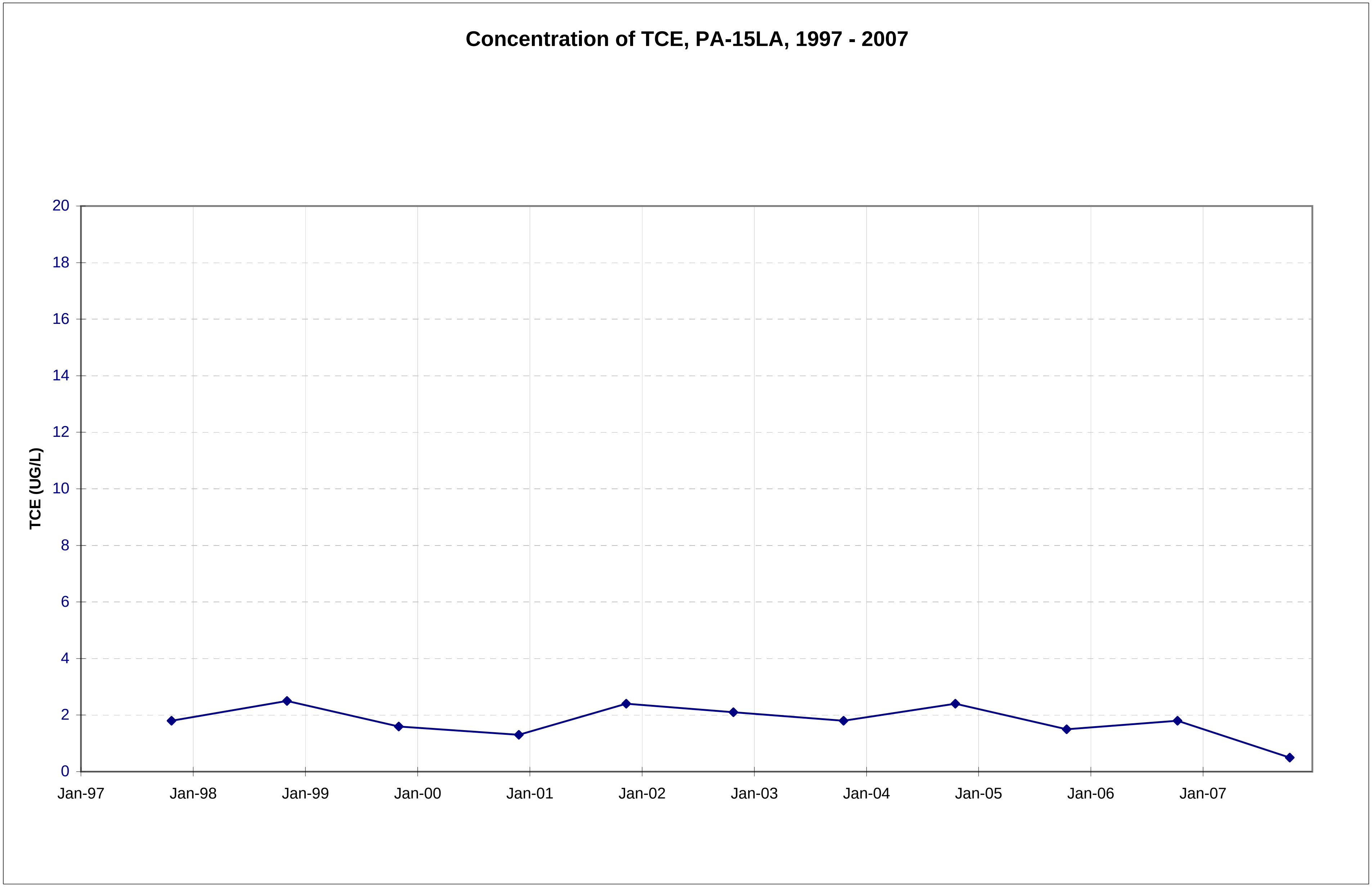

Concentration of TCE, PA-6LA, 1997 - 2007
TCE (UG/L)
500
450
400
350
300
250
200
150
100
50
0
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

Concentration of TCE, PA-9LA, 1997 - 2007

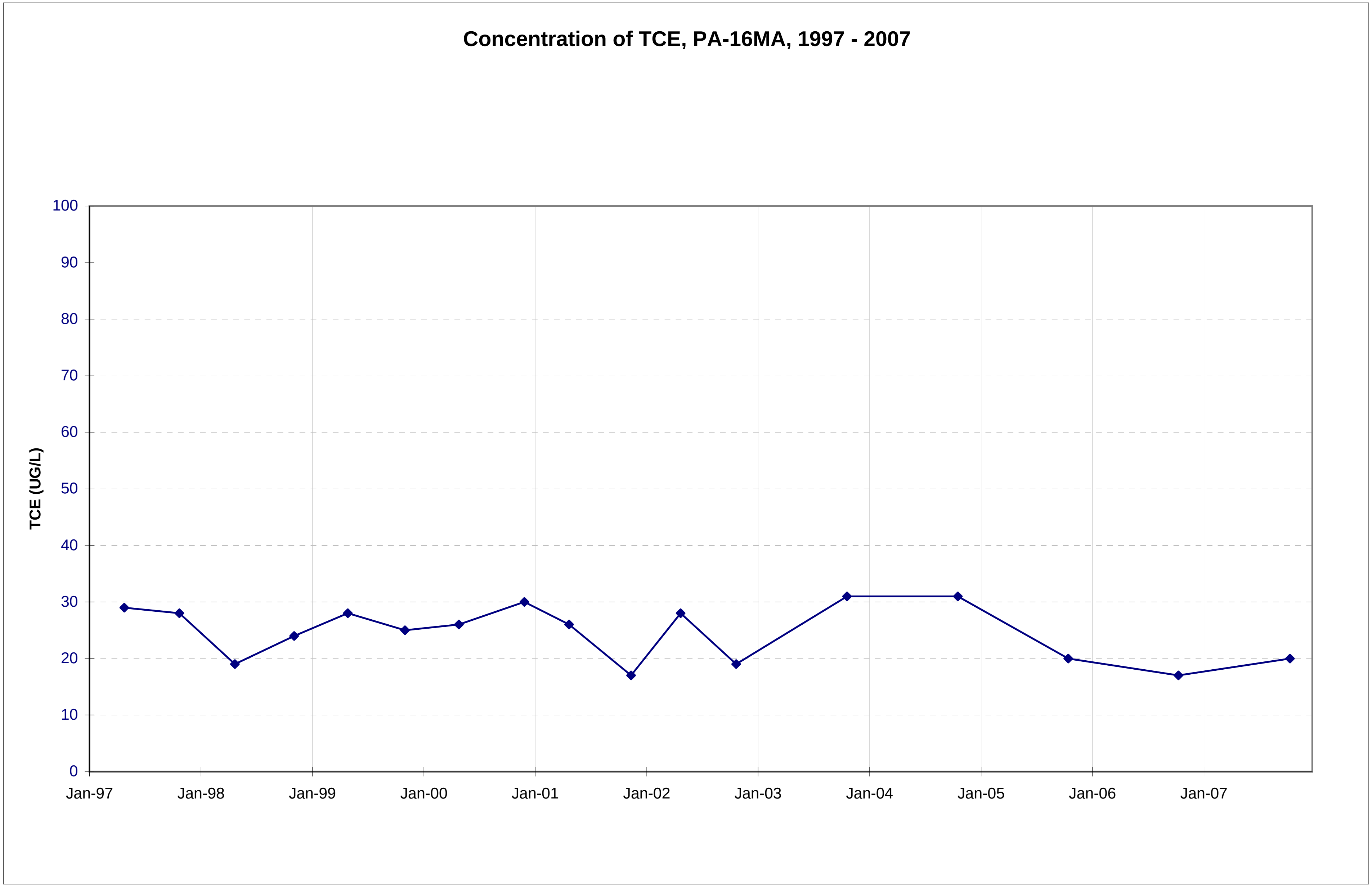



Concentration of TCE, PA-10MA, 1997 - 2007
TCE (UG/L)
0
50
100
150
200
250
300
350
400
450
500
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

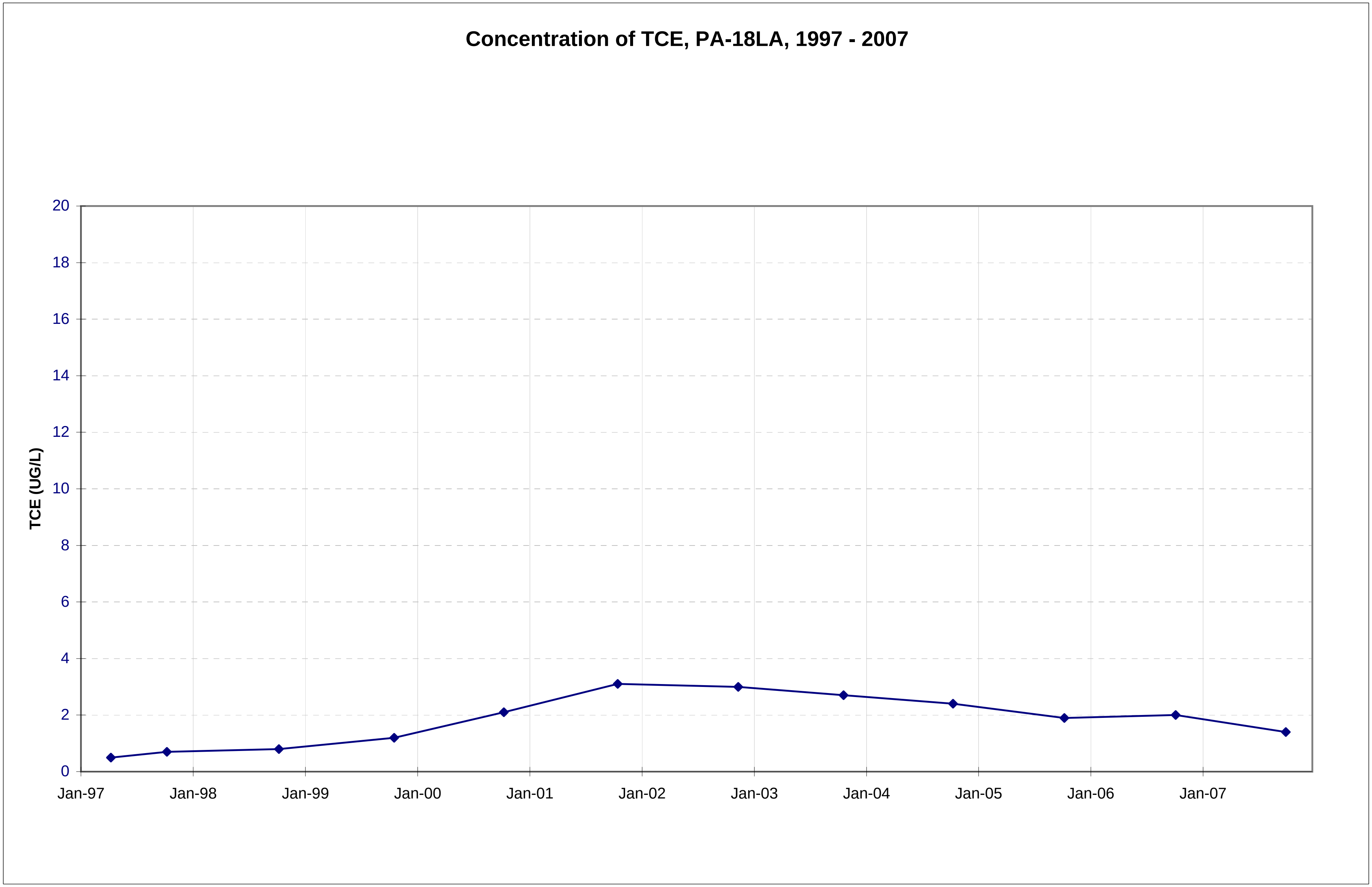

Concentration of TCE, PA-13LA, 1997 - 2007
TCE (UG/L)
100
90
80
70
60
50
40
30
20
10
0
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

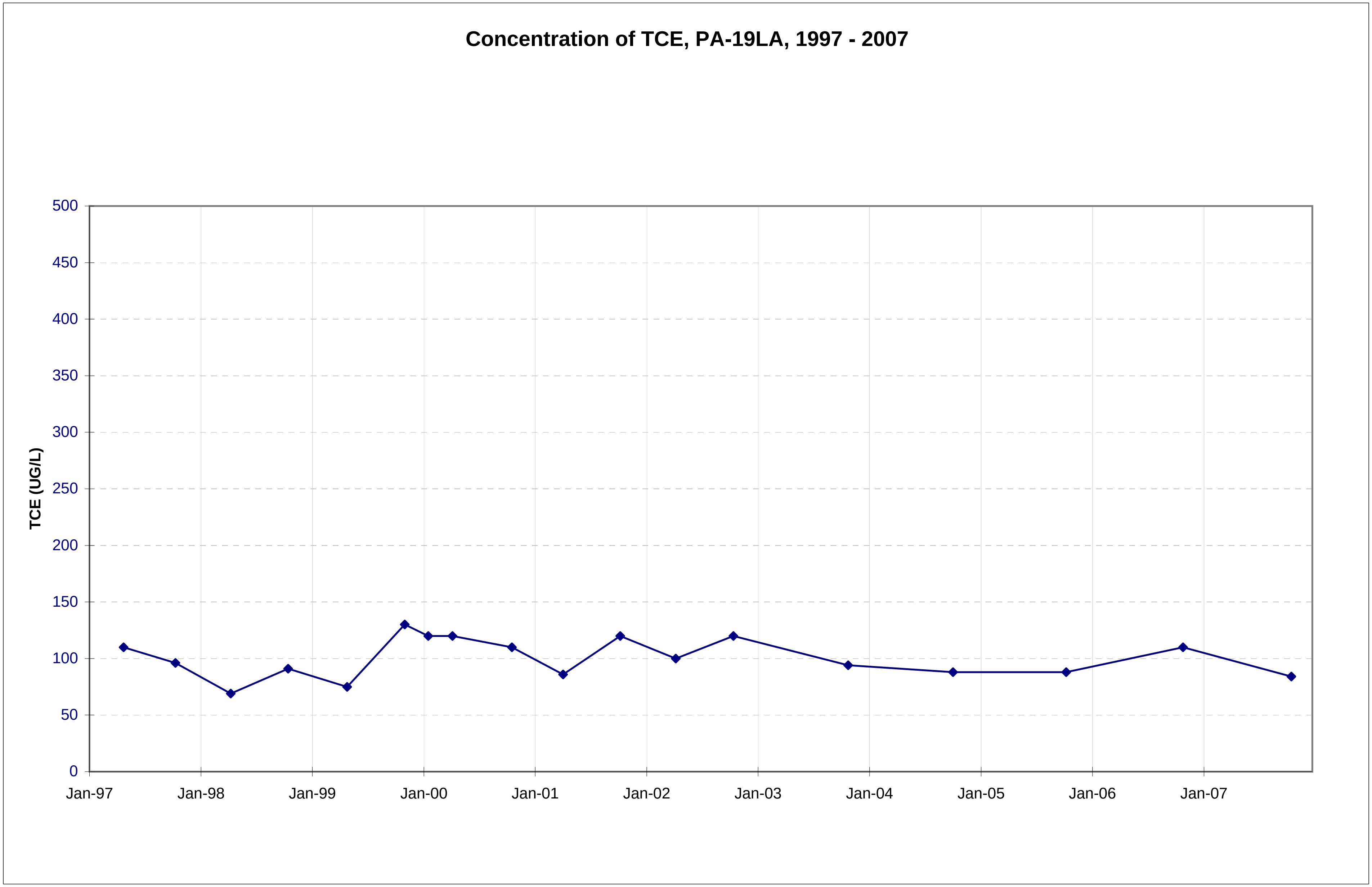


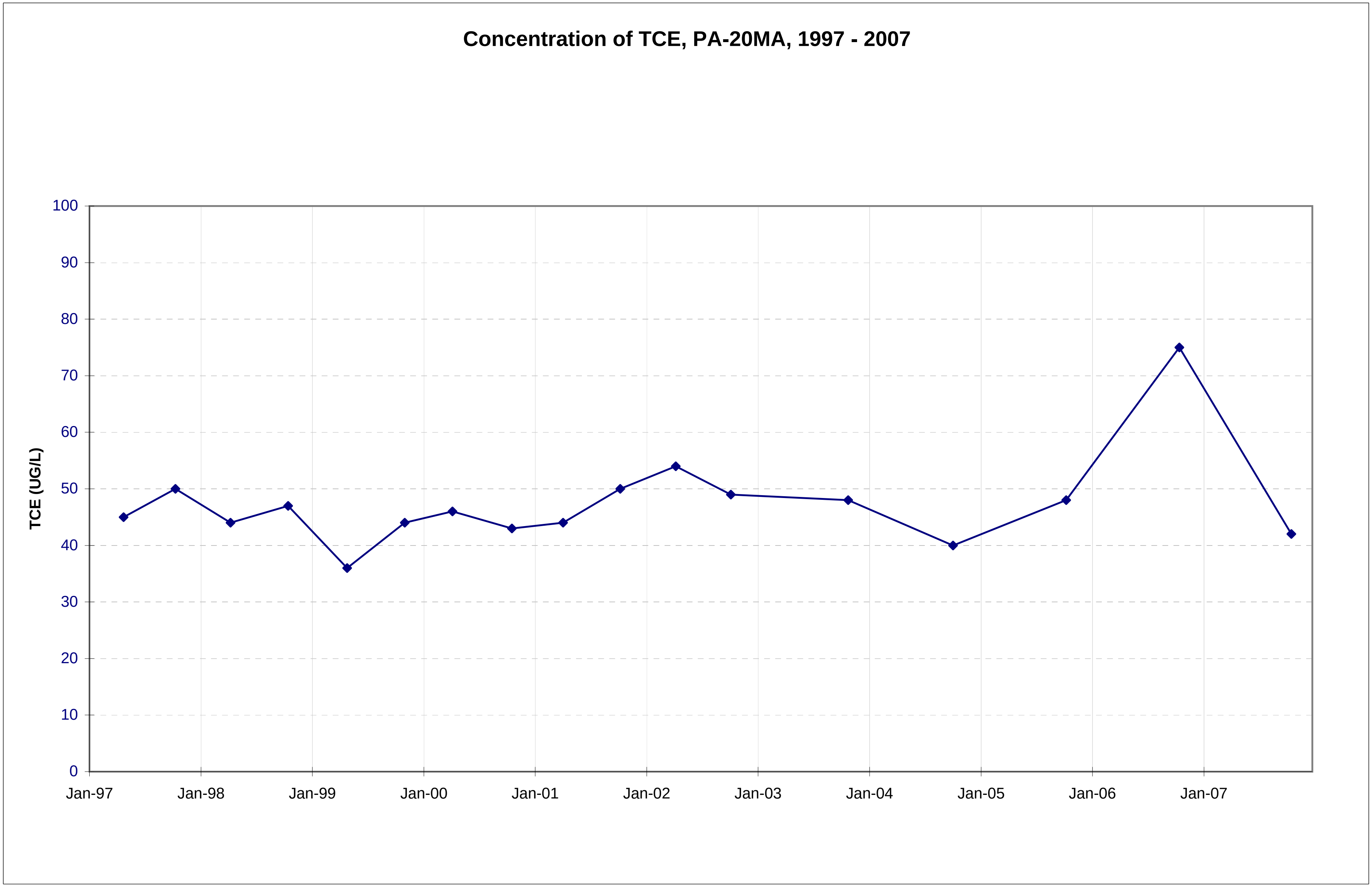
Concentration of TCE, PA-15LA, 1997 - 2007
TCE (UG/L)
20
18
16
14
12
10
8
6
4
2
0
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07



Concentration of TCE, PA-16MA, 1997 - 2007
TCE (UG/L)
100
90
80
70
60
50
40
30
20
10
0
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

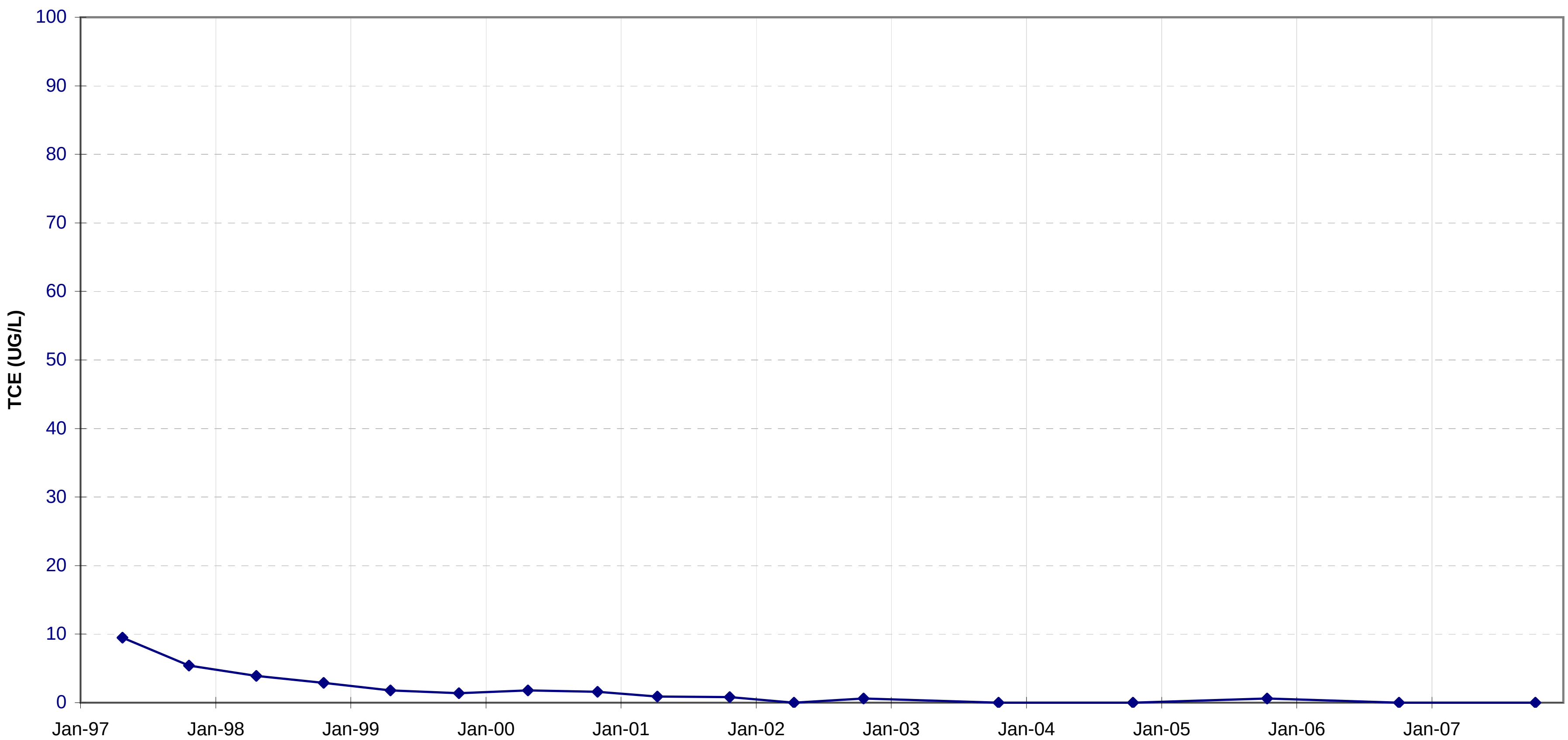

Concentration of TCE, PA-18LA, 1997 - 2007
TCE (UG/L)
20
18
16
14
12
10
8
6
4
2
0
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

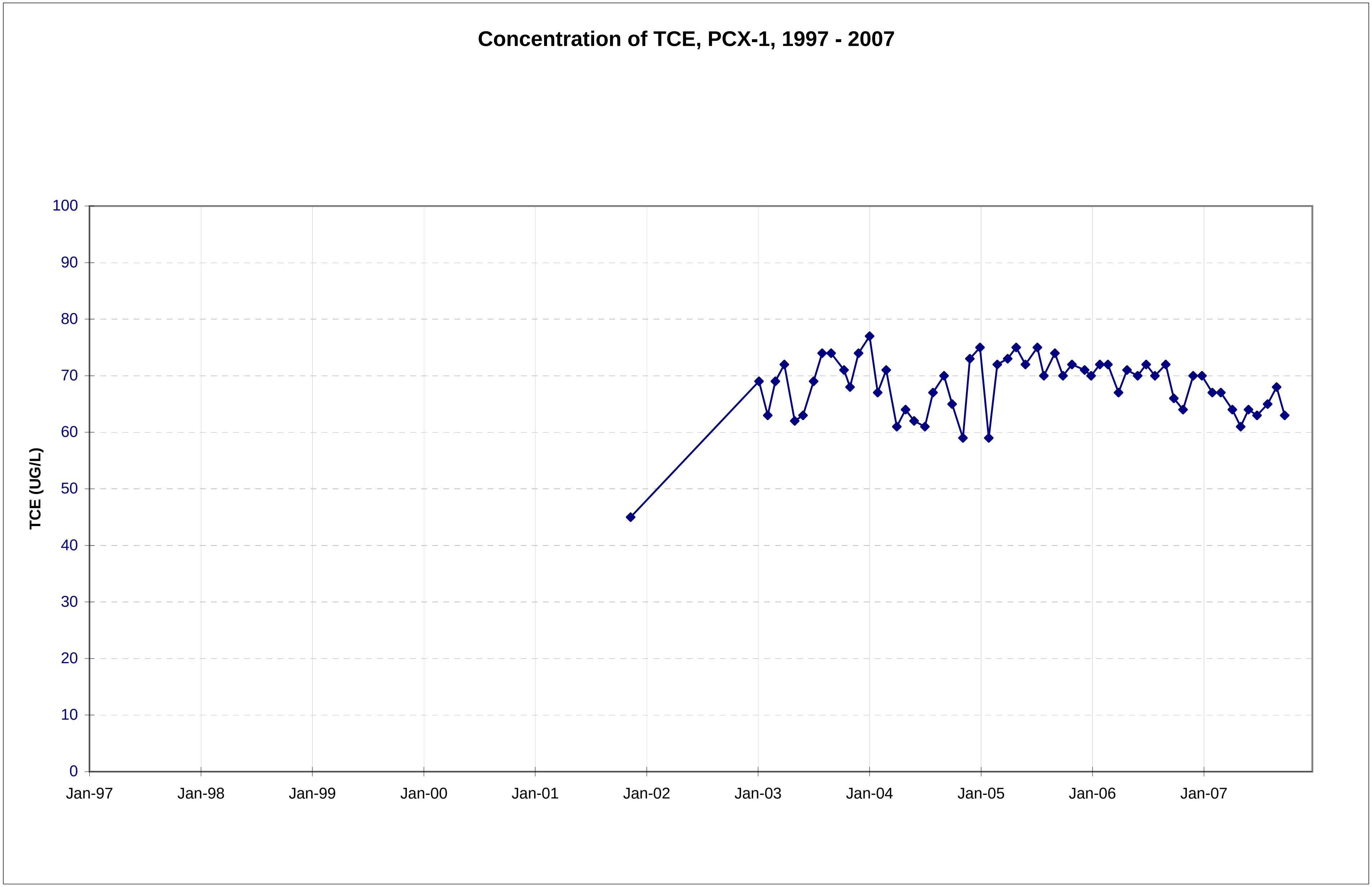

Concentration of TCE, PA-19LA, 1997 - 2007
TCE (UG/L)
500
450
400
350
300
250
200
150
100
50
0
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07



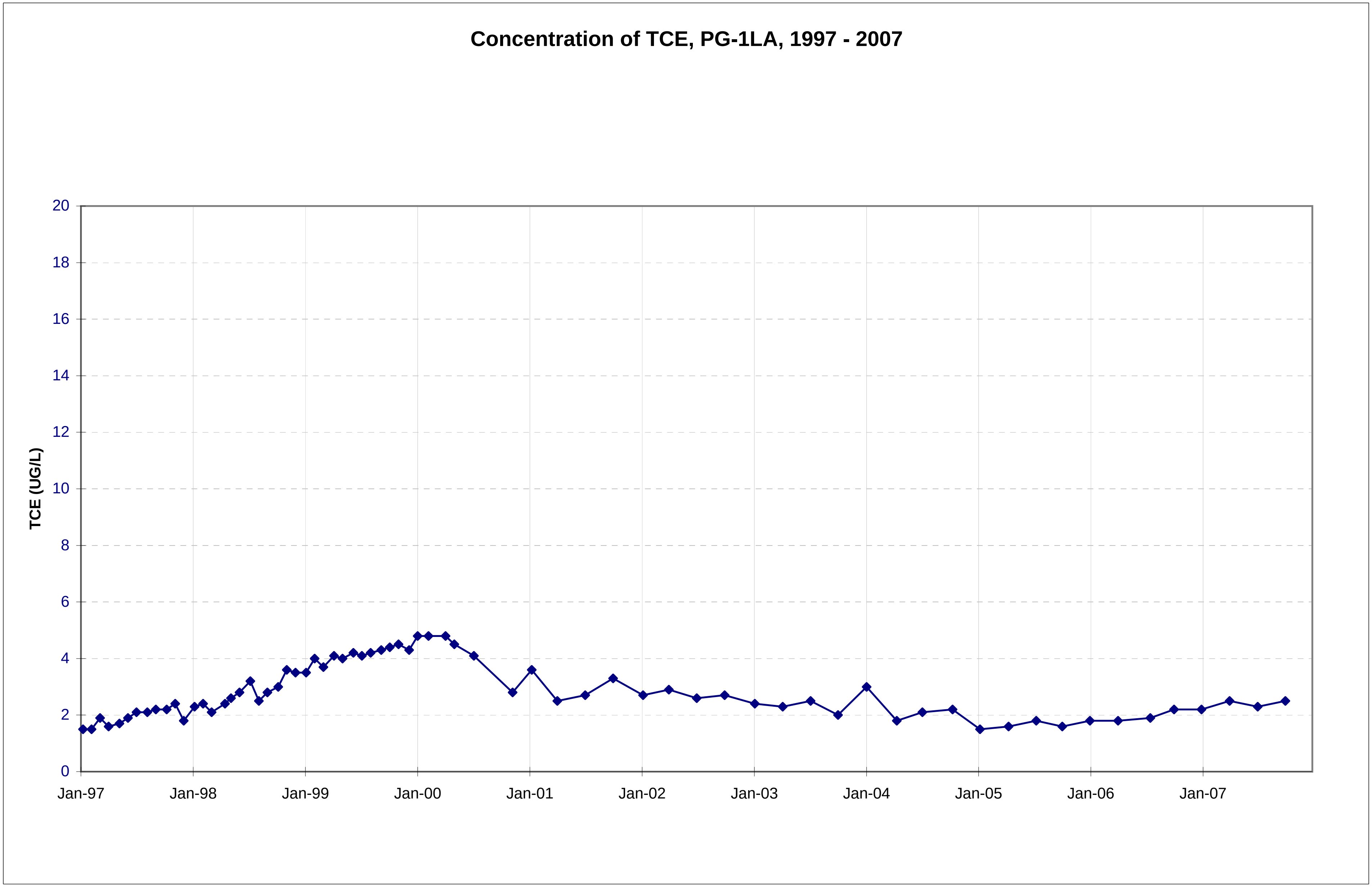
Concentration of TCE, PA-20MA, 1997 - 2007
TCE (UG/L)
100
90
80
70
60
50
40
30
20
10
0
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

Concentration of TCE, PA-21MA, 1997 - 2007



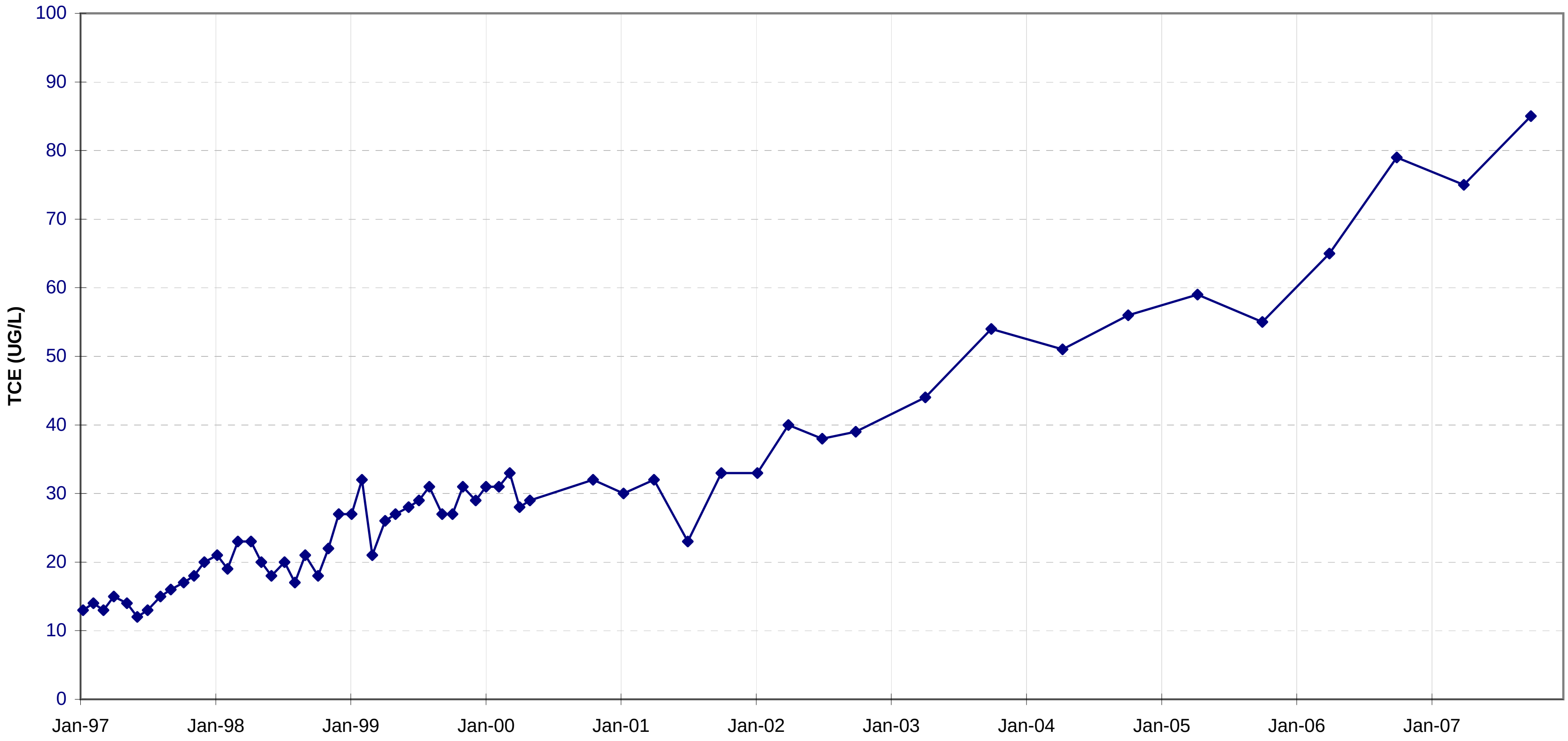


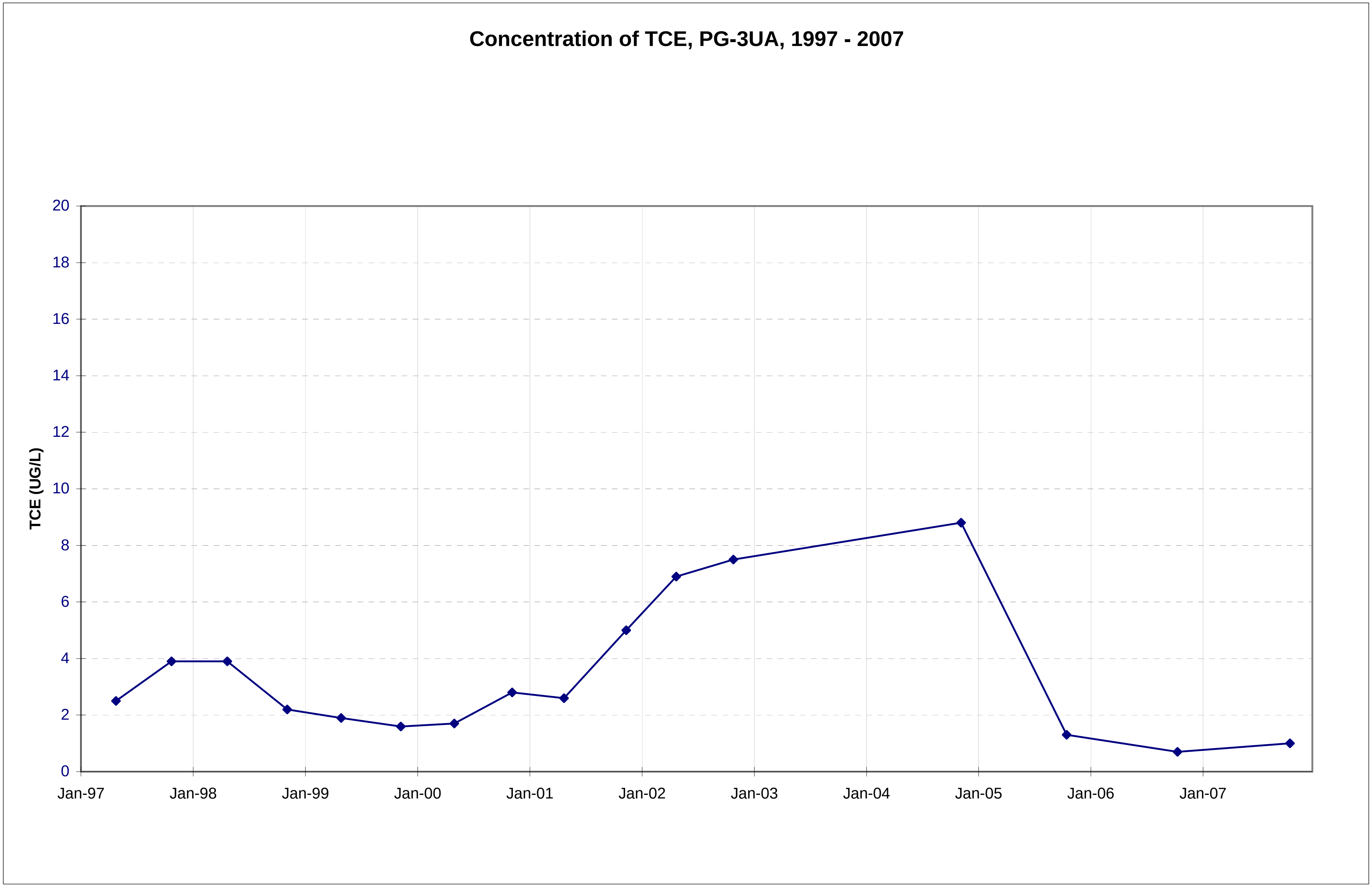
Concentration of TCE, PCX-1, 1997 - 2007
TCE (UG/L)
100
90
80
70
60
50
40
30
20
10
0
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07



Concentration of TCE, PG-1LA, 1997 - 2007
TCE (UG/L)
20
18
16
14
12
10
8
6
4
2
0
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

Concentration of TCE, PG-2LA, 1997 - 2007





Concentration of TCE, PG-3UA, 1997 - 2007
TCE (UG/L)
0
2
4
6
8
10
12
14
16
18
20
Jan-97
Jan-98
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Jan-01
Jan-02
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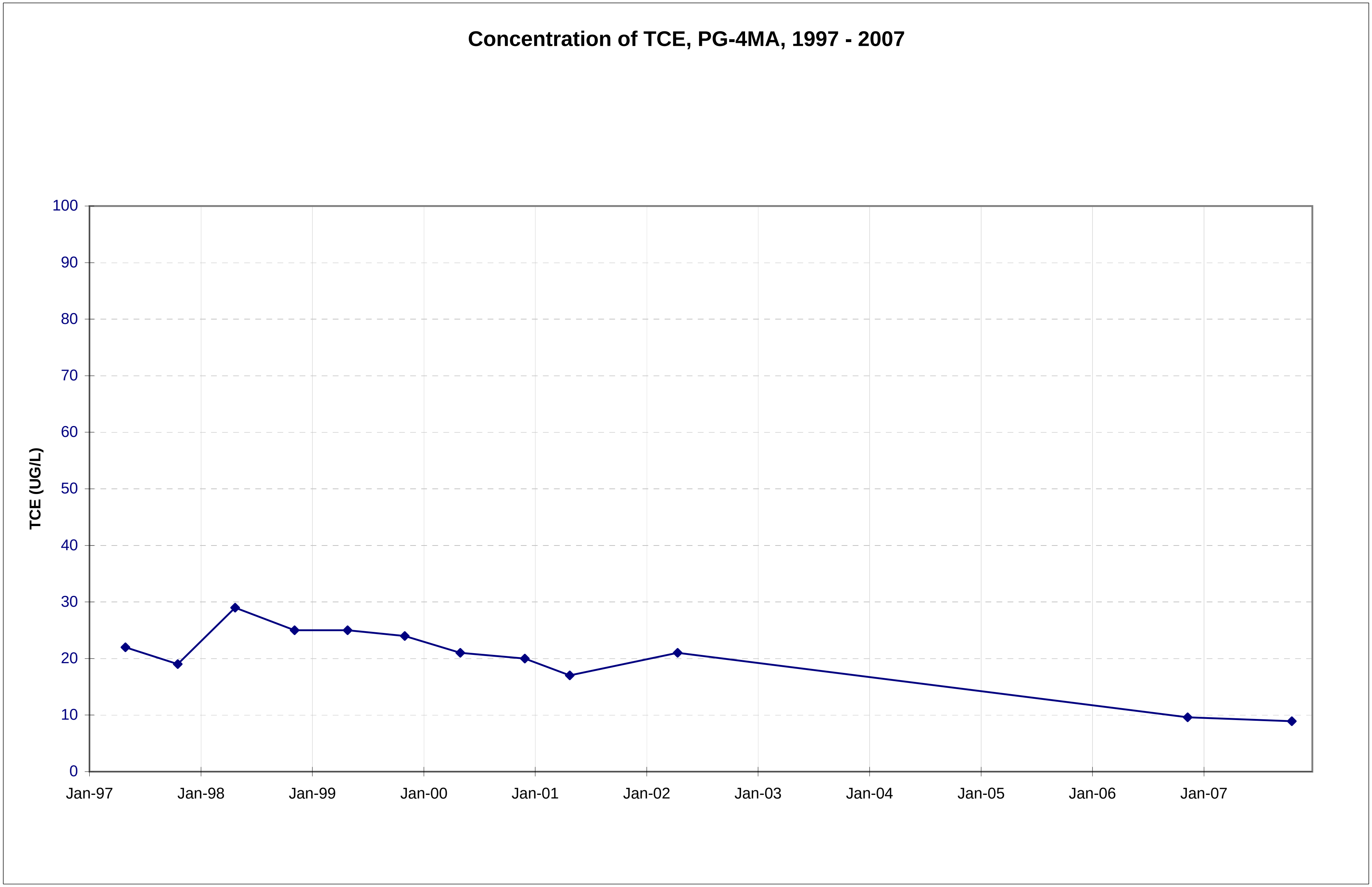
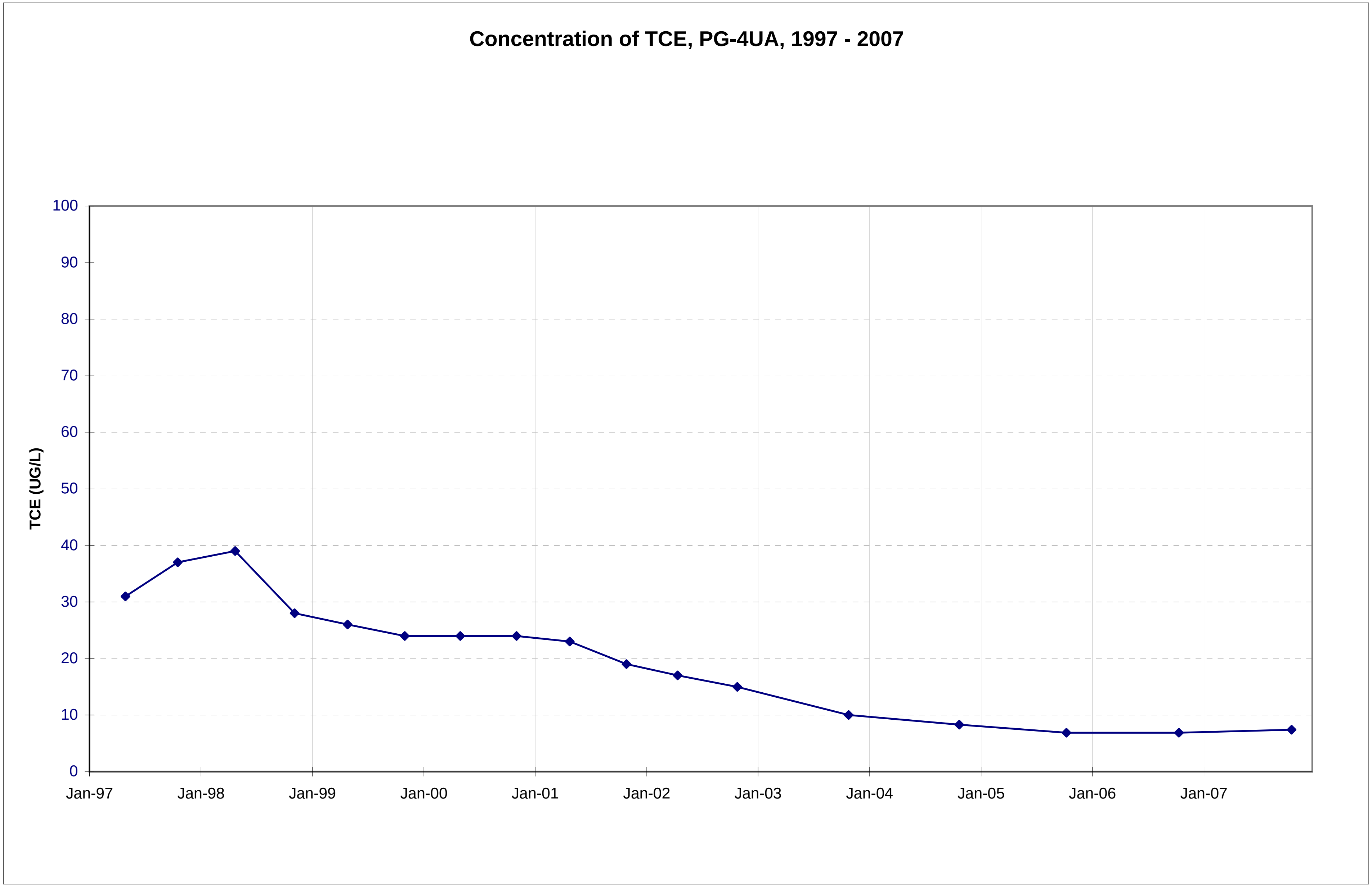
Jan-04
Jan-05
Jan-06
Jan-07



Concentration of TCE, PG-4MA, 1997 - 2007
TCE (UG/L)
0
10
20
30
40
50
60
70
80
90
100
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07



Concentration of TCE, PG-4UA, 1997 - 2007
TCE (UG/L)
100
90
80
70
60
50
40
30
20
10
0
Jan-97
Jan-98
Jan-99
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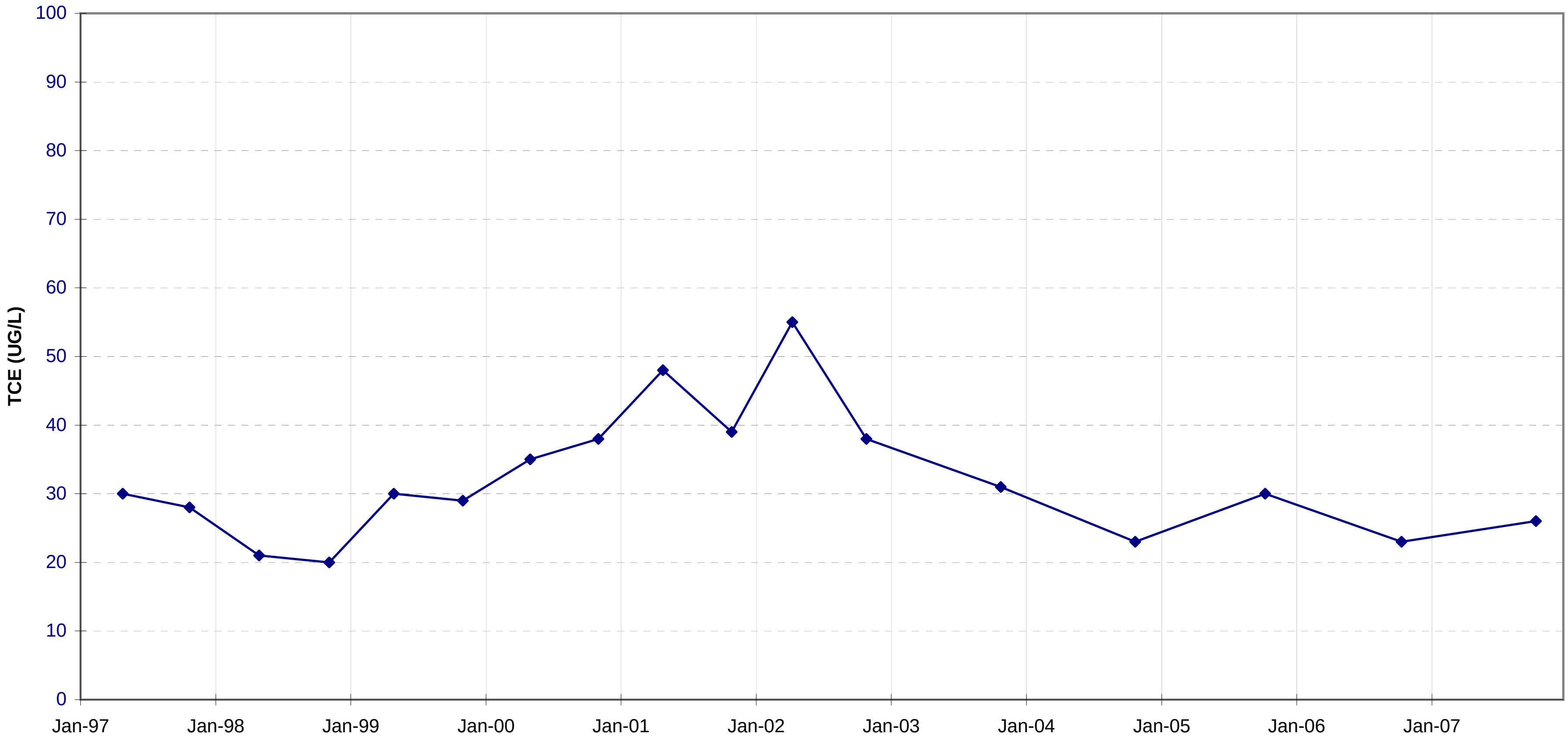
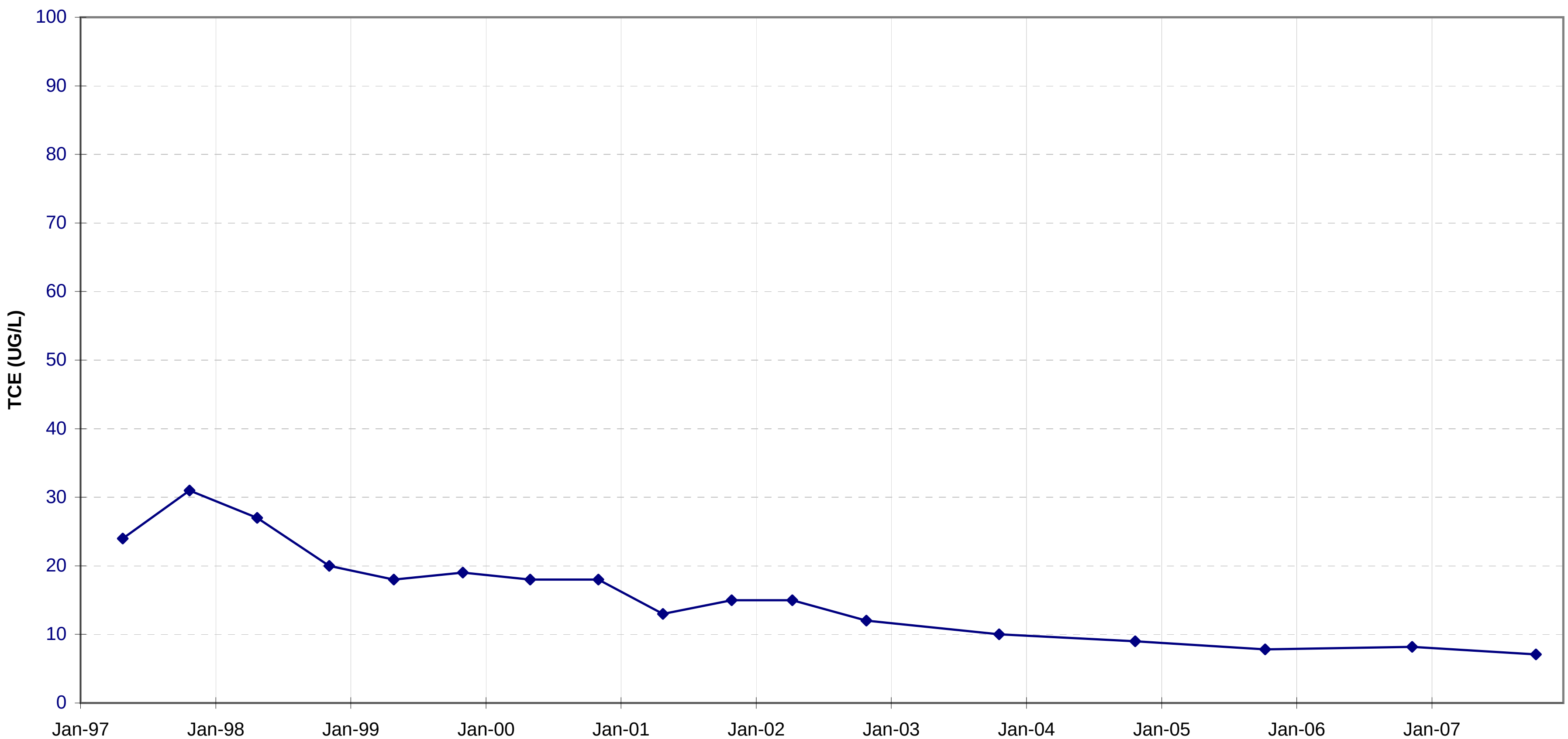
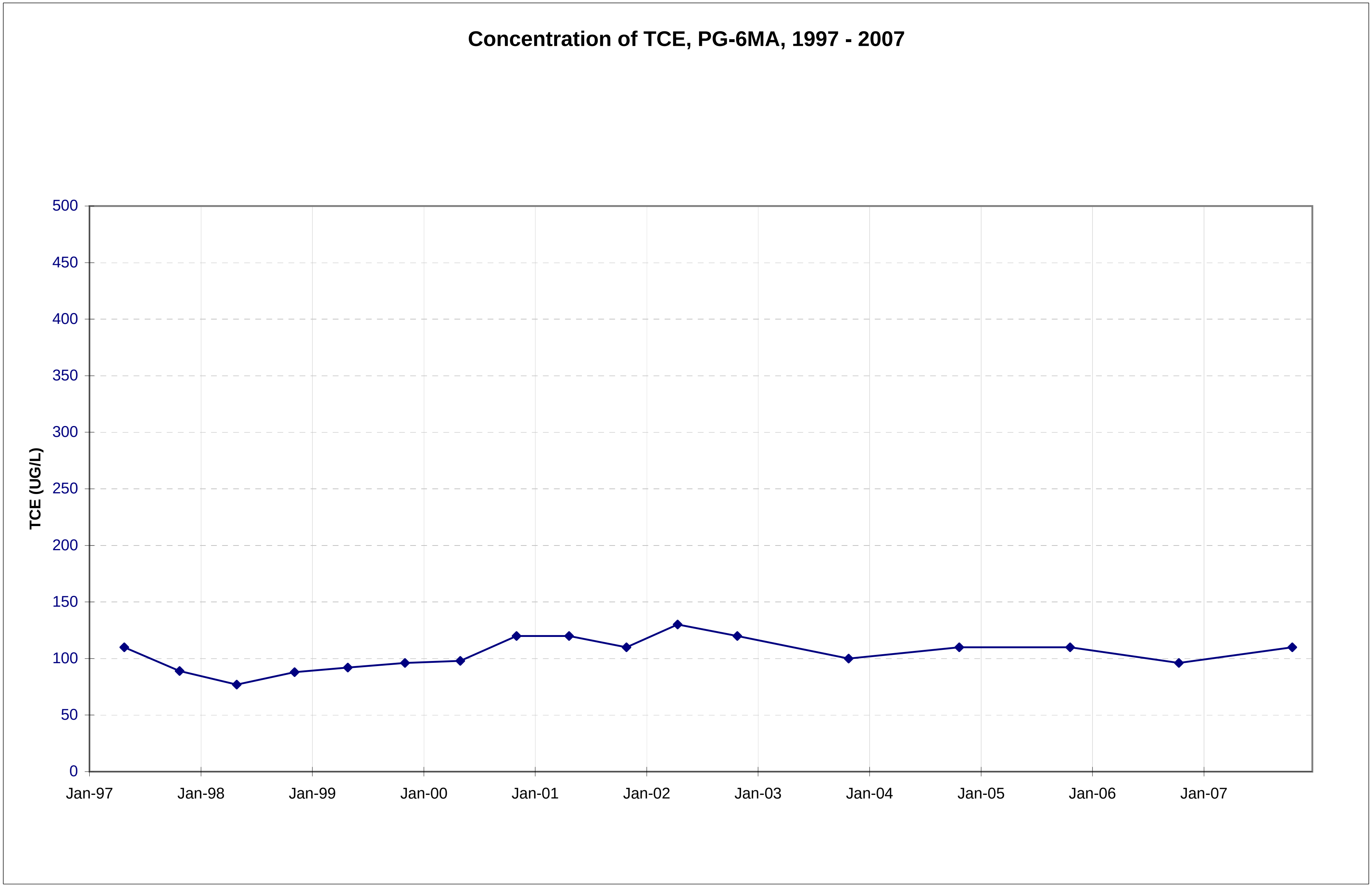
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

Concentration of TCE, PG-5MA, 1997 - 2007



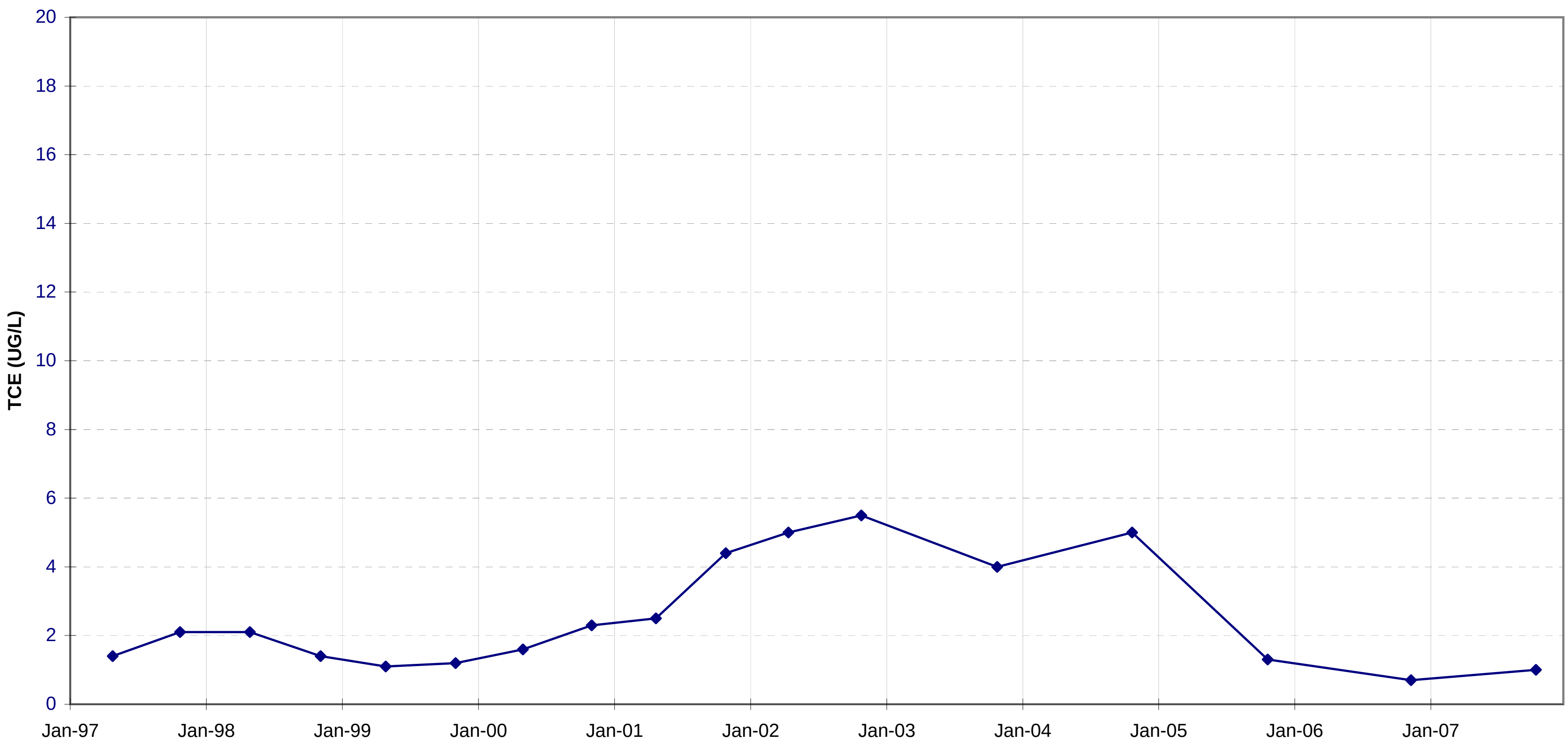
Concentration of TCE, PG-5UA, 1997 - 2007

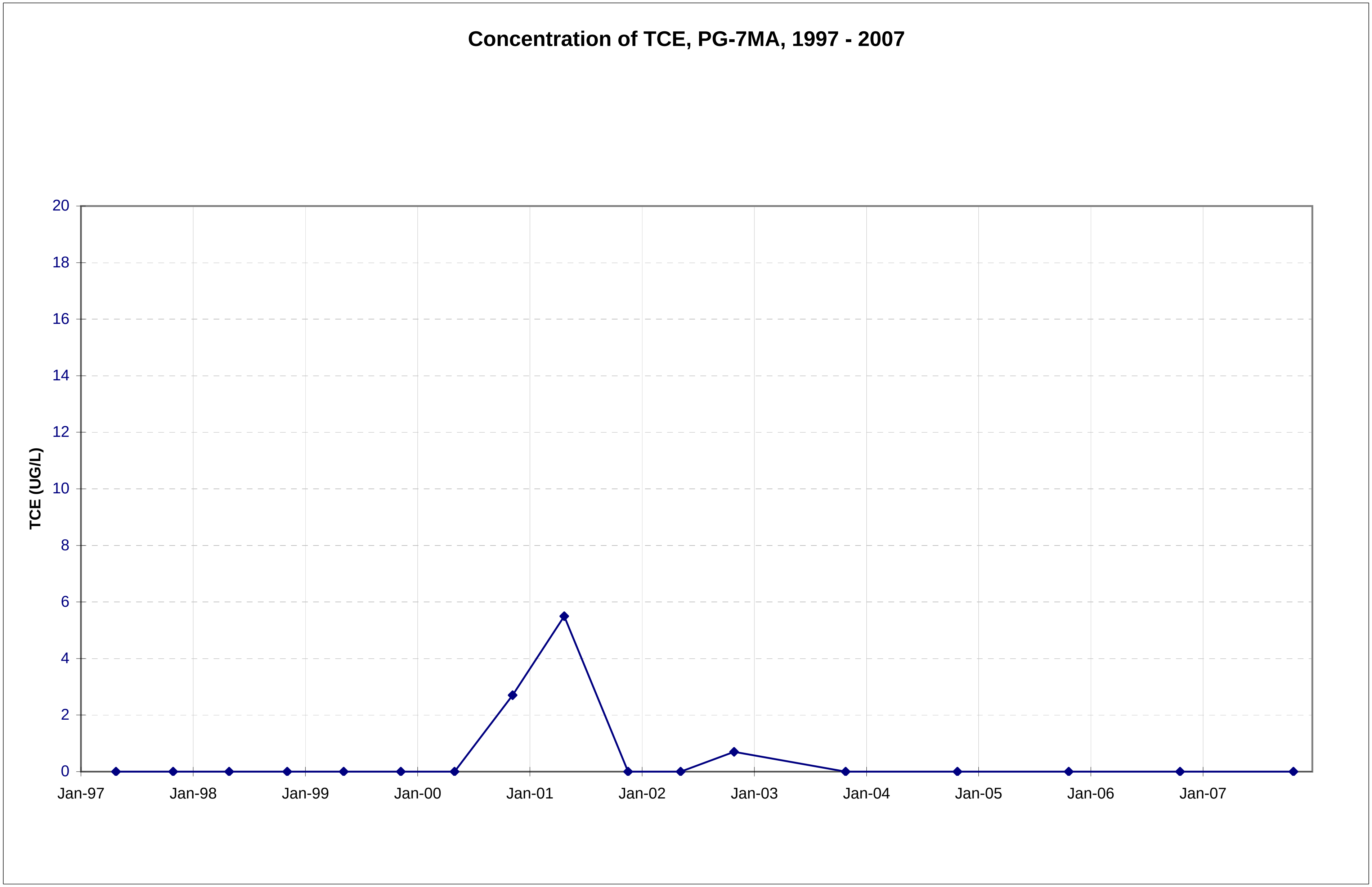




Concentration of TCE, PG-6MA, 1997 - 2007
TCE (UG/L)
500
450
400
350
300
250
200
150
100
50
0
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

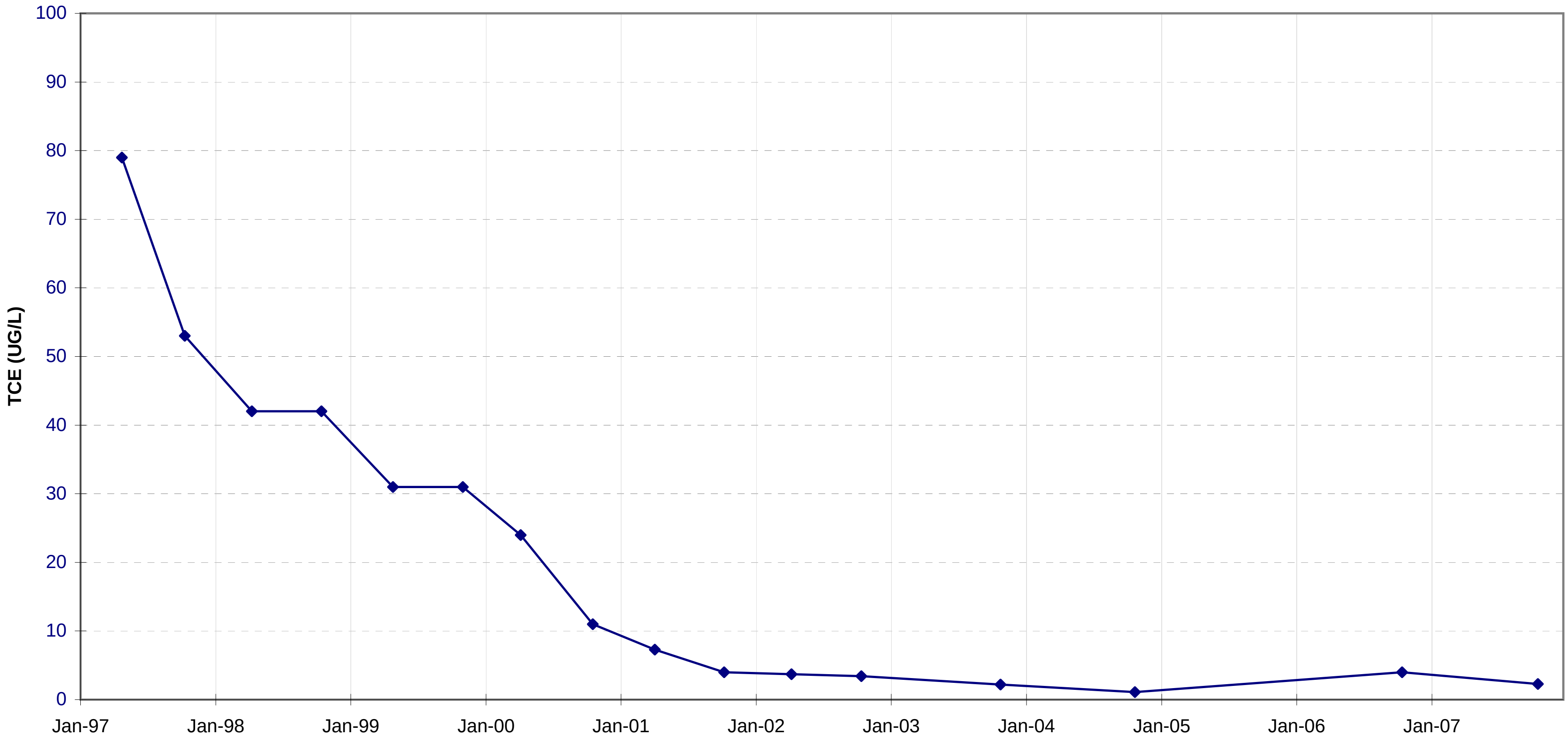
Concentration of TCE, PG-6UA, 1997 - 2007

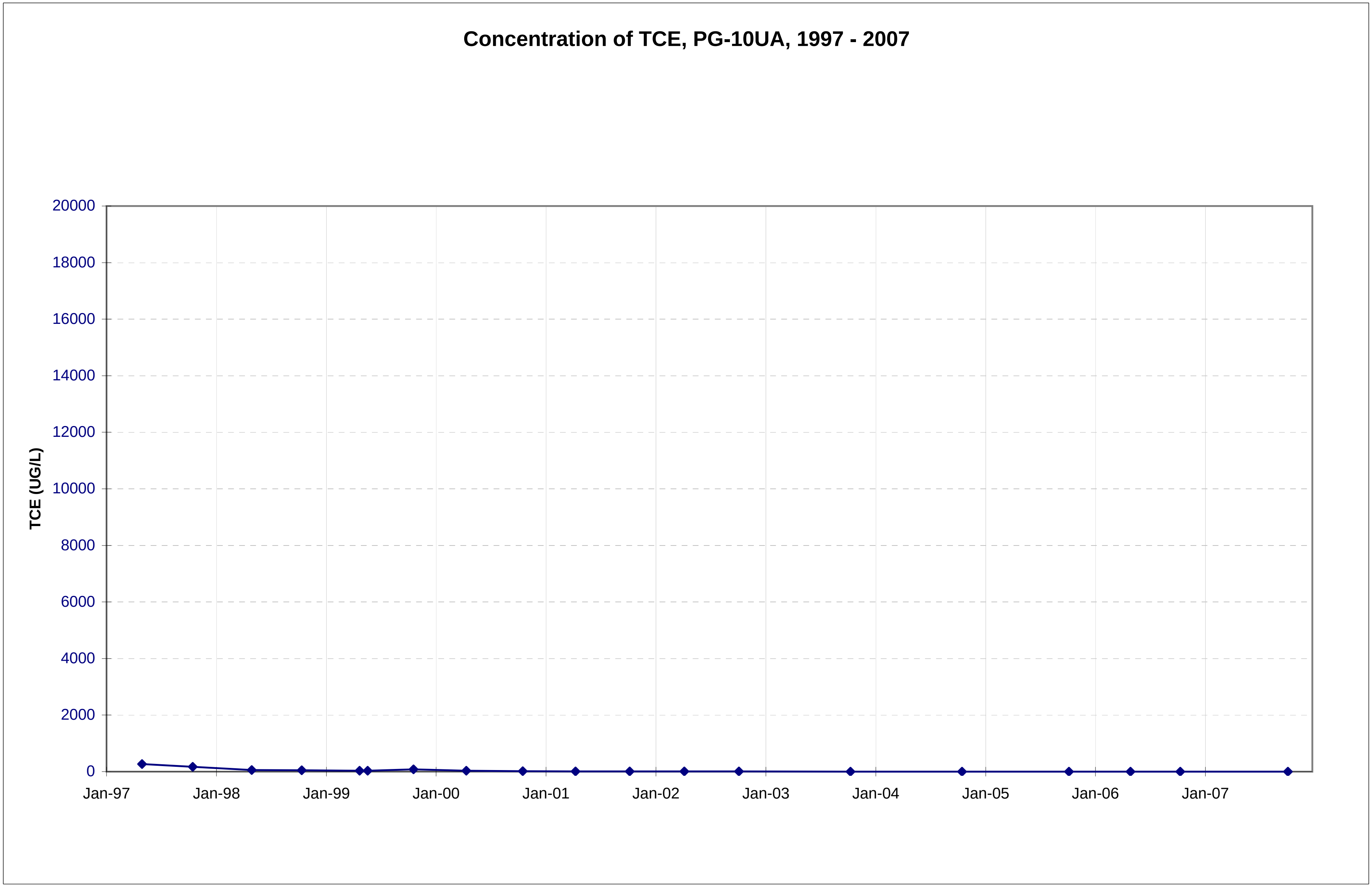




Concentration of TCE, PG-7MA, 1997 - 2007
TCE (UG/L)
0
2
4
6
8
10
12
14
16
18
20
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

Concentration of TCE, PG-8UA, 1997 - 2007





Concentration of TCE, PG-10UA, 1997 - 2007
TCE (UG/L)
20000
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
Jan-97
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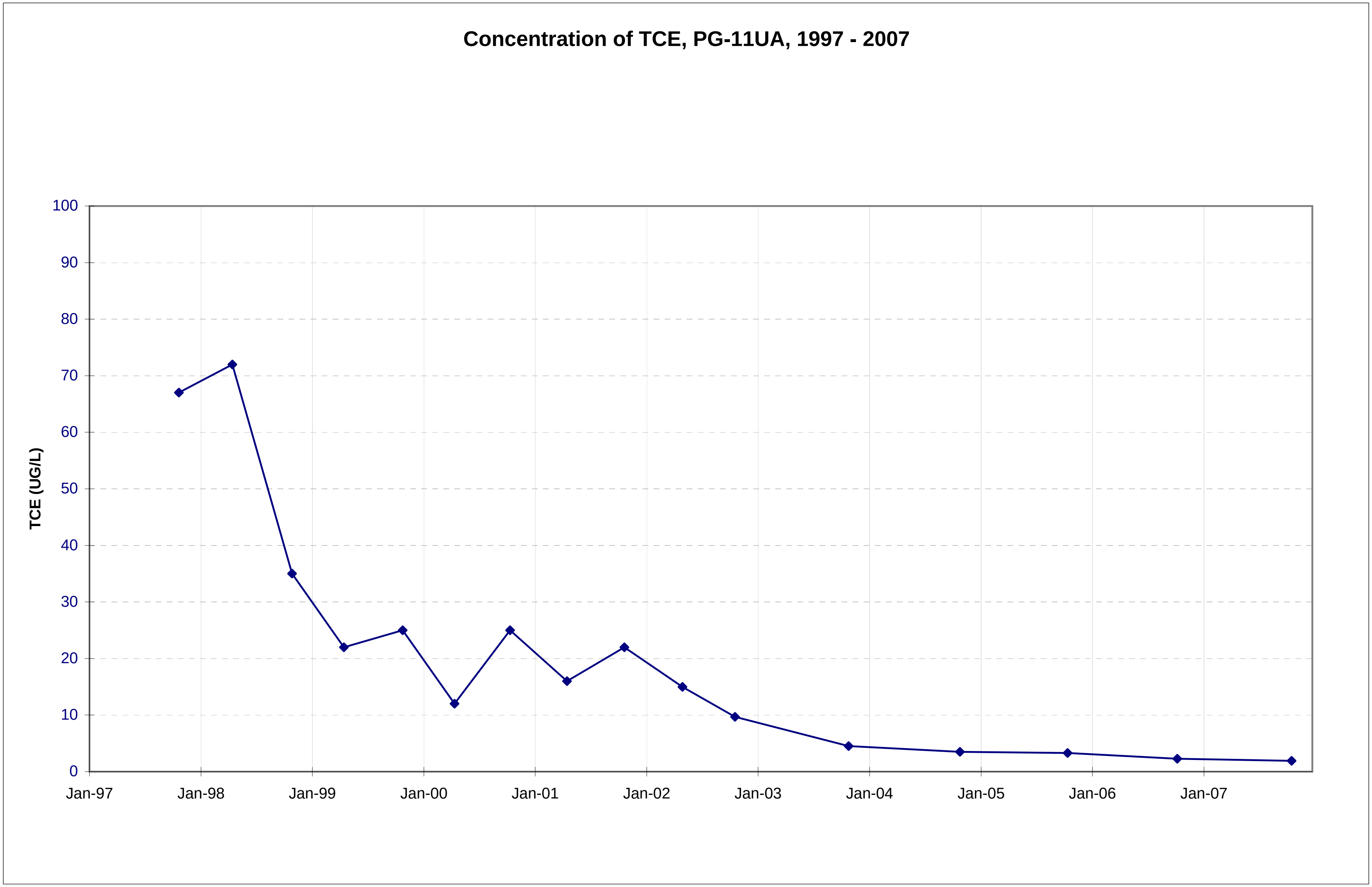
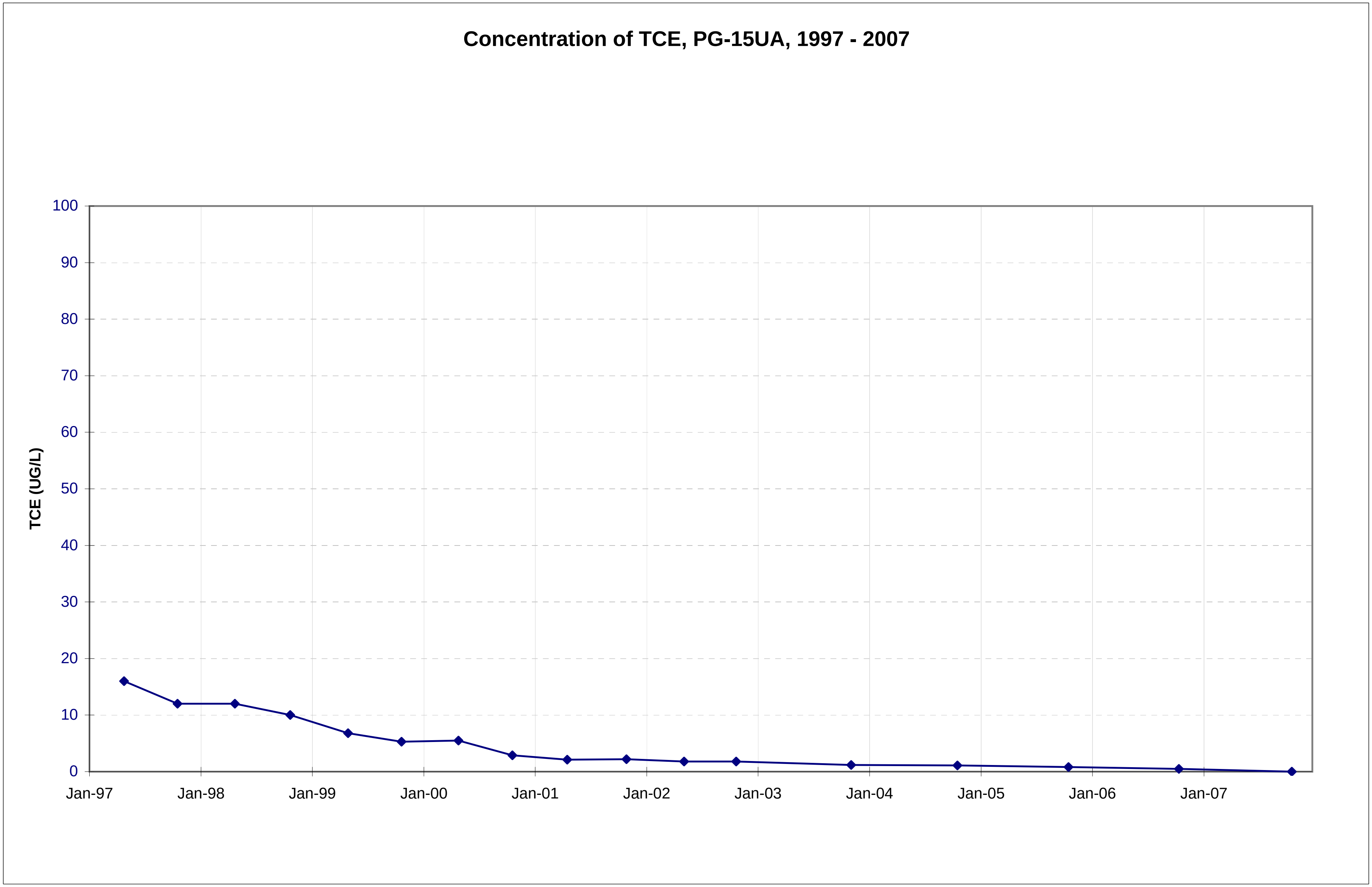
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07



Concentration of TCE, PG-11UA, 1997 - 2007
TCE (UG/L)
100
90
80
70
60
50
40
30
20
10
0
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07



Concentration of TCE, PG-15UA, 1997 - 2007
TCE (UG/L)
0
10
20
30
40
50
60
70
80
90
100
Jan-97
Jan-98
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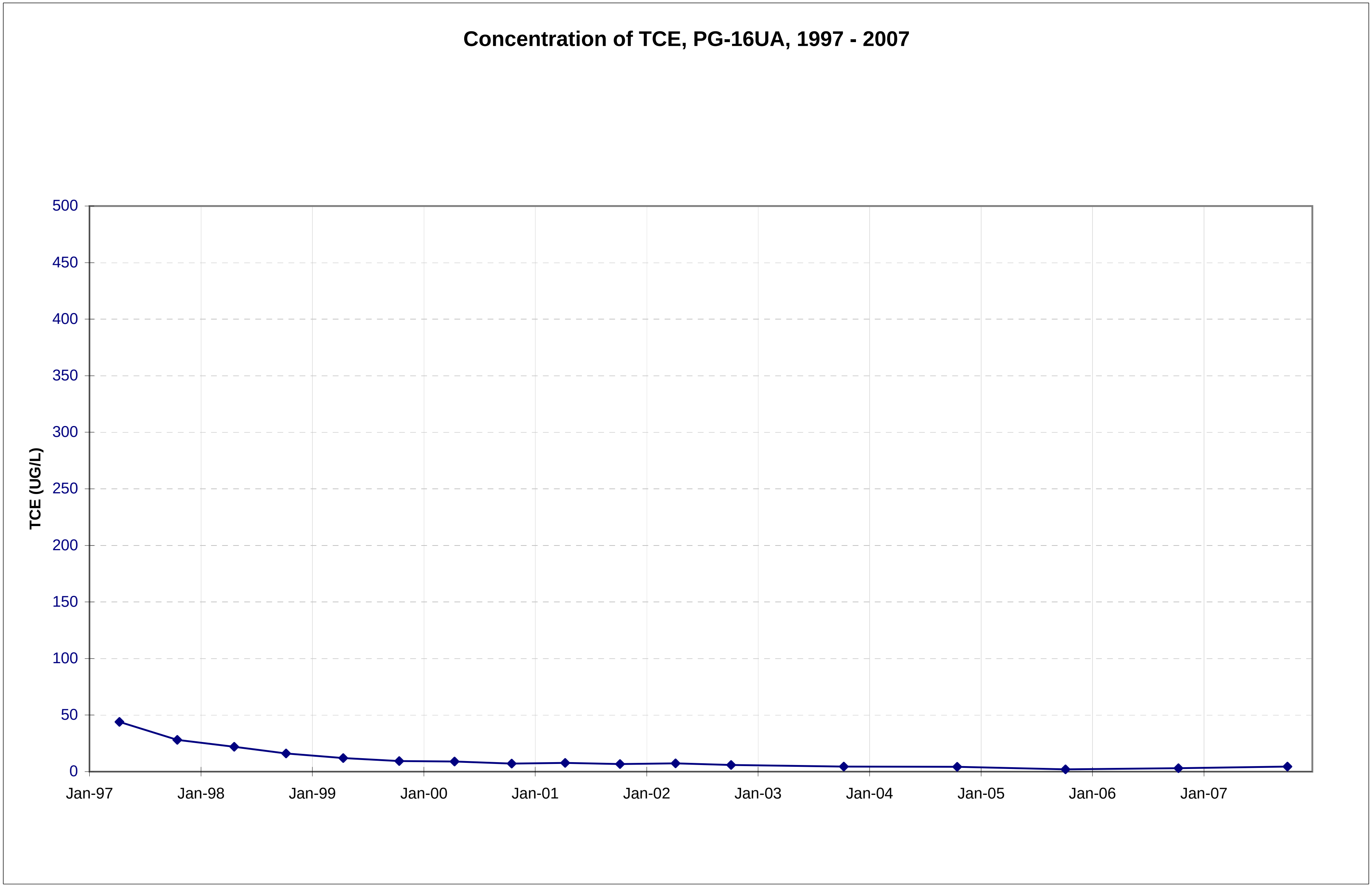
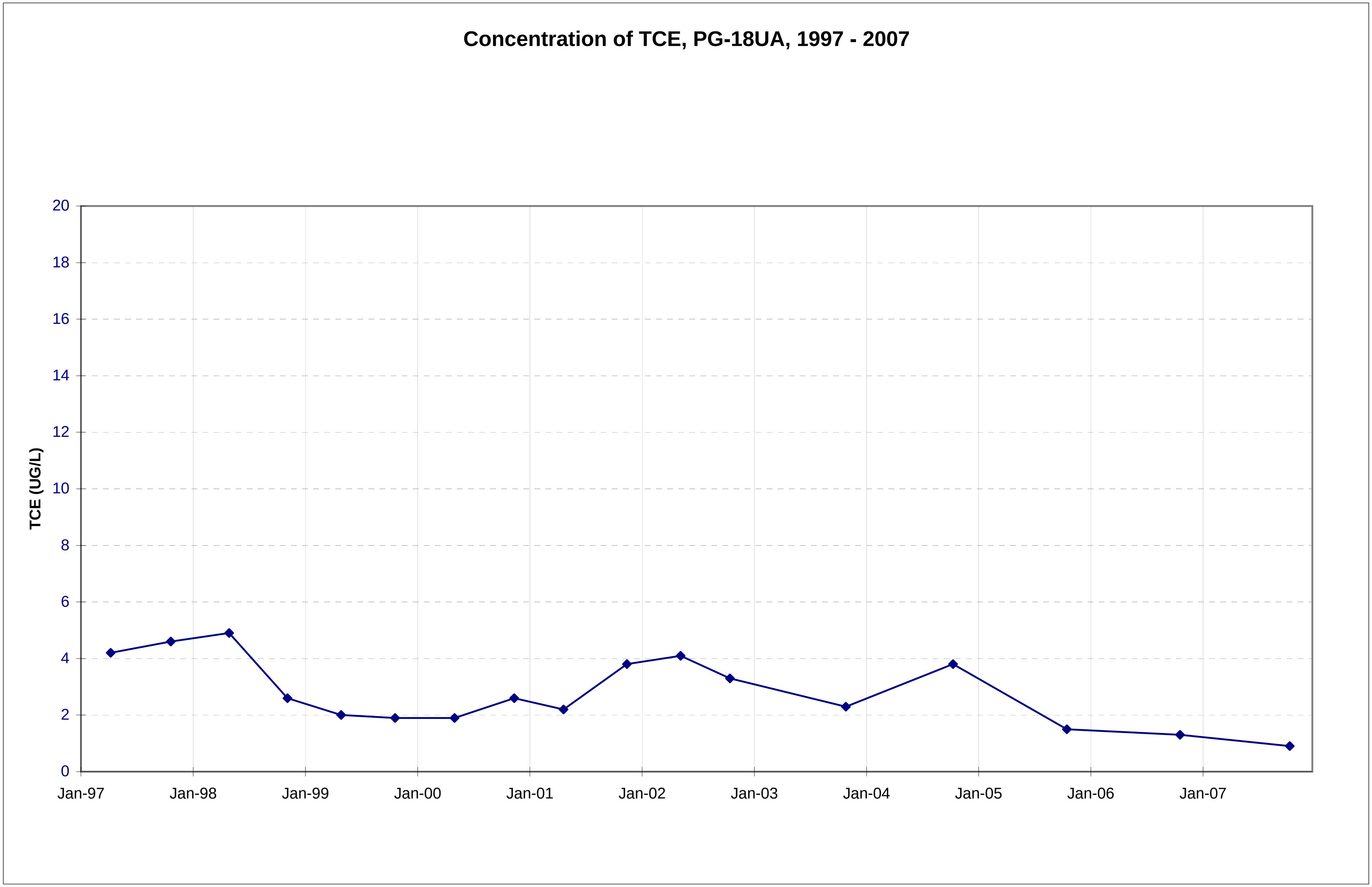
Jan-05
Jan-06
Jan-07

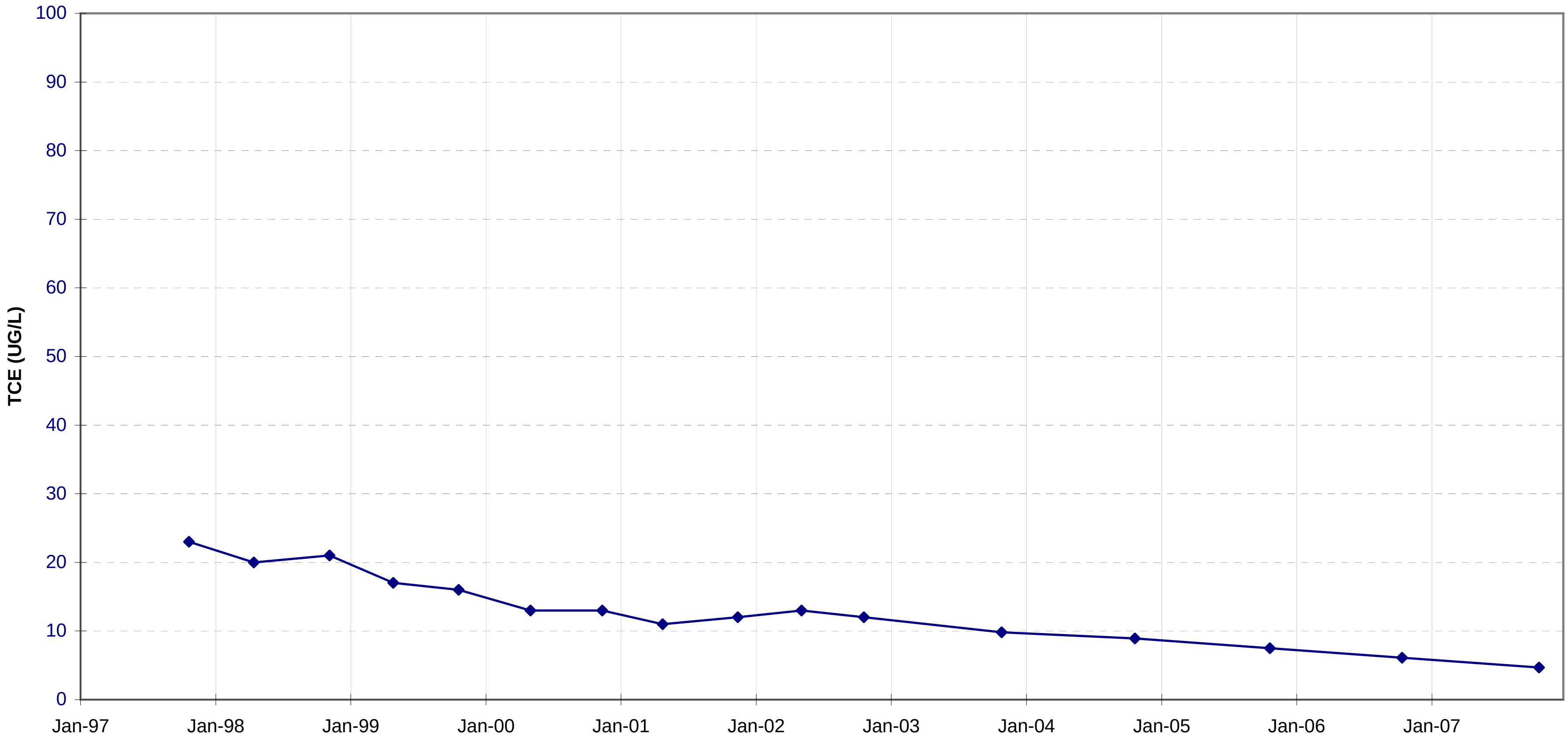


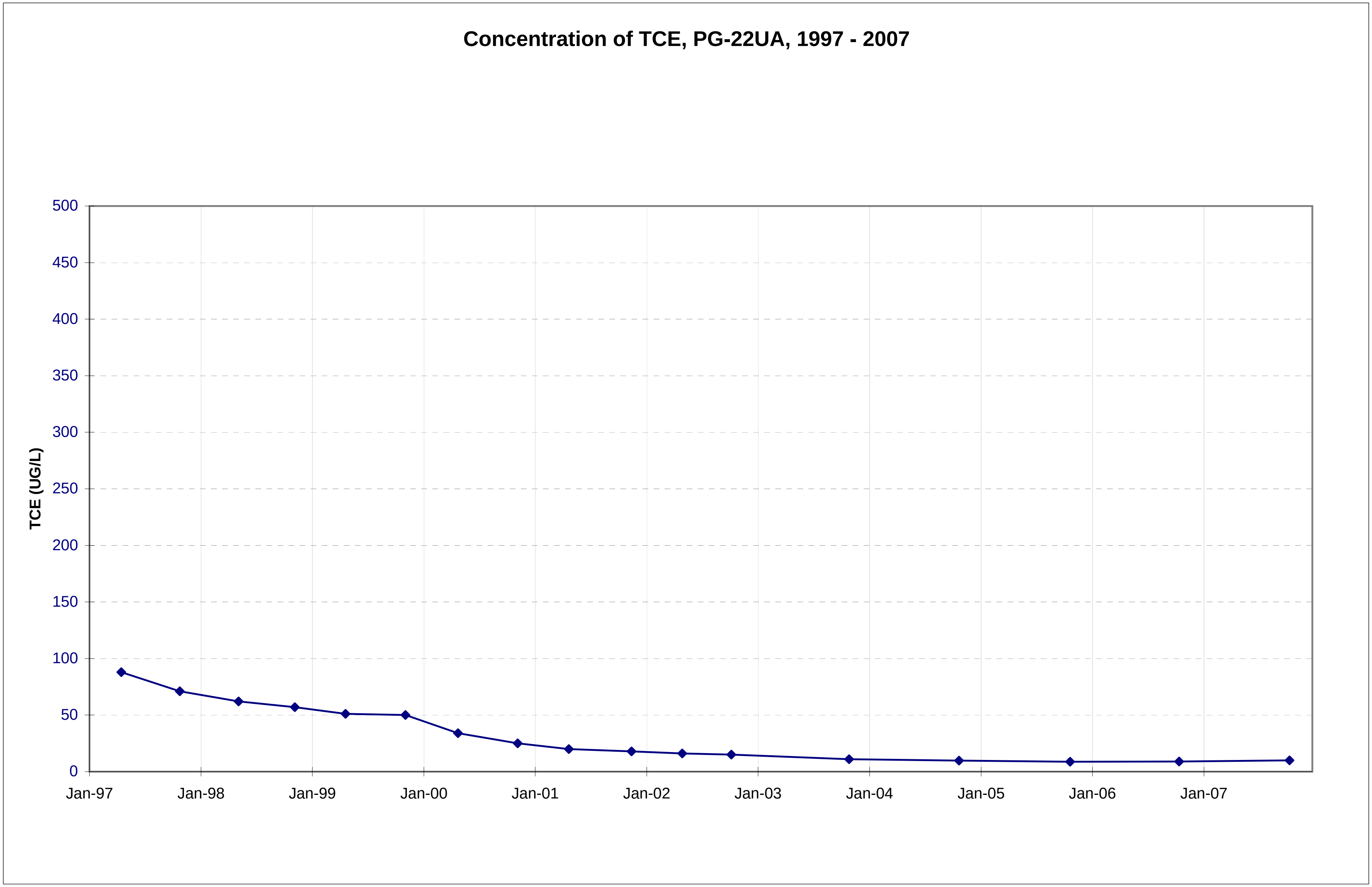
Concentration of TCE, PG-16UA, 1997 - 2007
TCE (UG/L)
500
450
400
350
300
250
200
150
100
50
0
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07



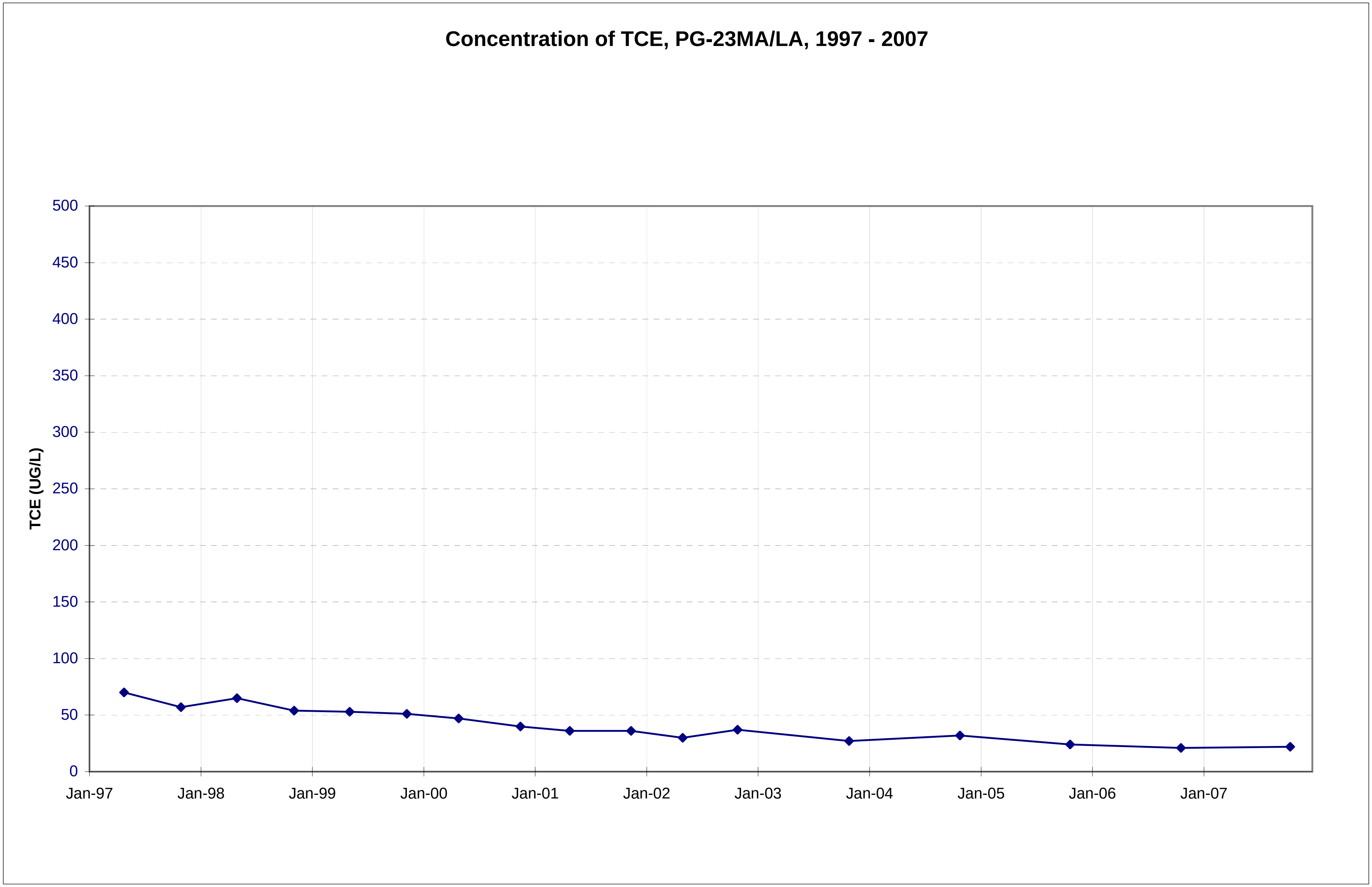
Concentration of TCE, PG-18UA, 1997 - 2007
TCE (UG/L)
0
2
4
6
8
10
12
14
16
18
20
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

Concentration of TCE, PG-19UA, 1997 - 2007





Concentration of TCE, PG-22UA, 1997 - 2007
TCE (UG/L)
500
450
400
350
300
250
200
150
100
50
0
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07



Concentration of TCE, PG-23MA/LA, 1997 - 2007
TCE (UG/L)
0
50
100
150
200
250
300
350
400
450
500
Jan-97
Jan-98
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Jan-01
Jan-02
Jan-03
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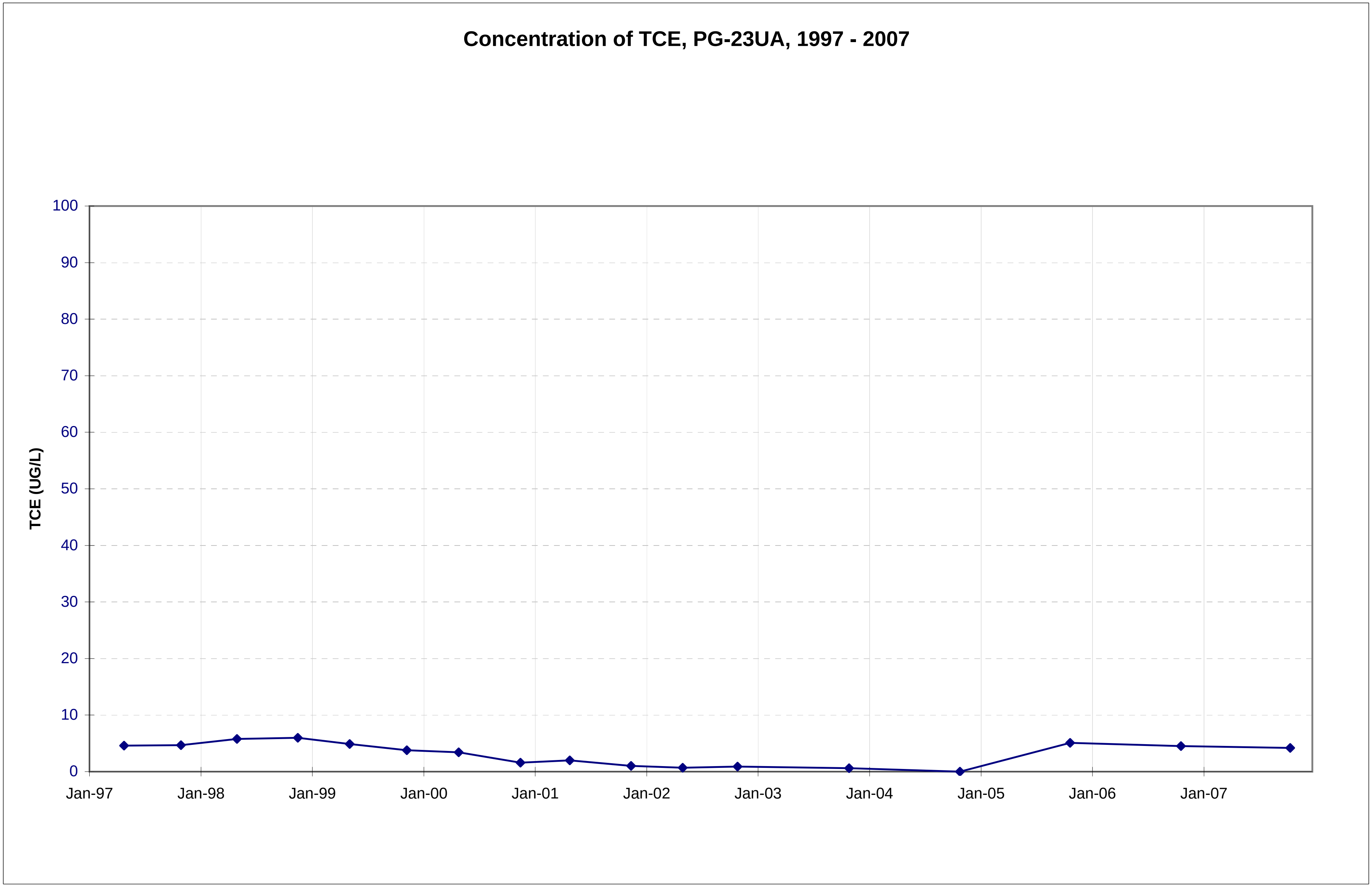
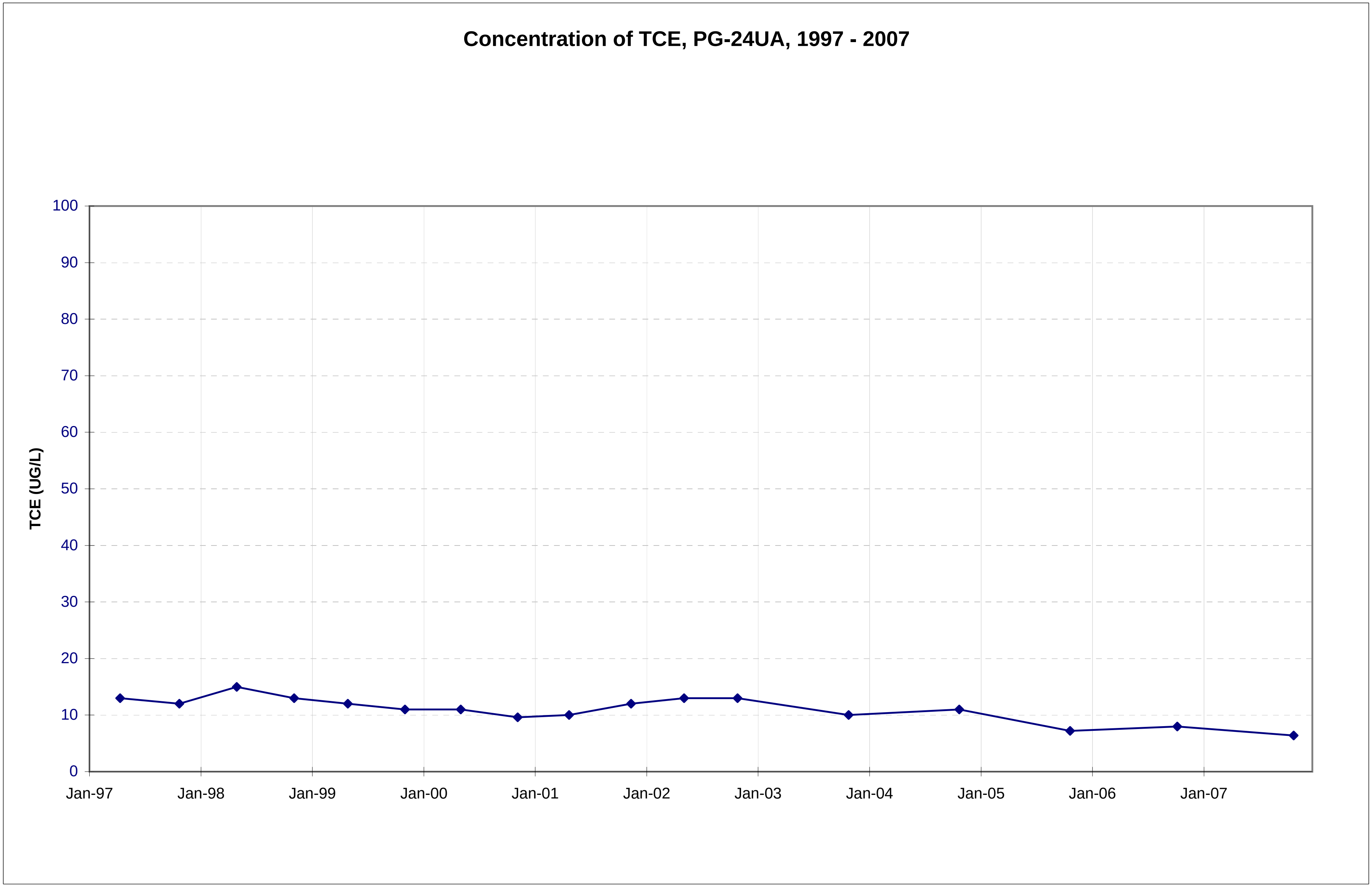
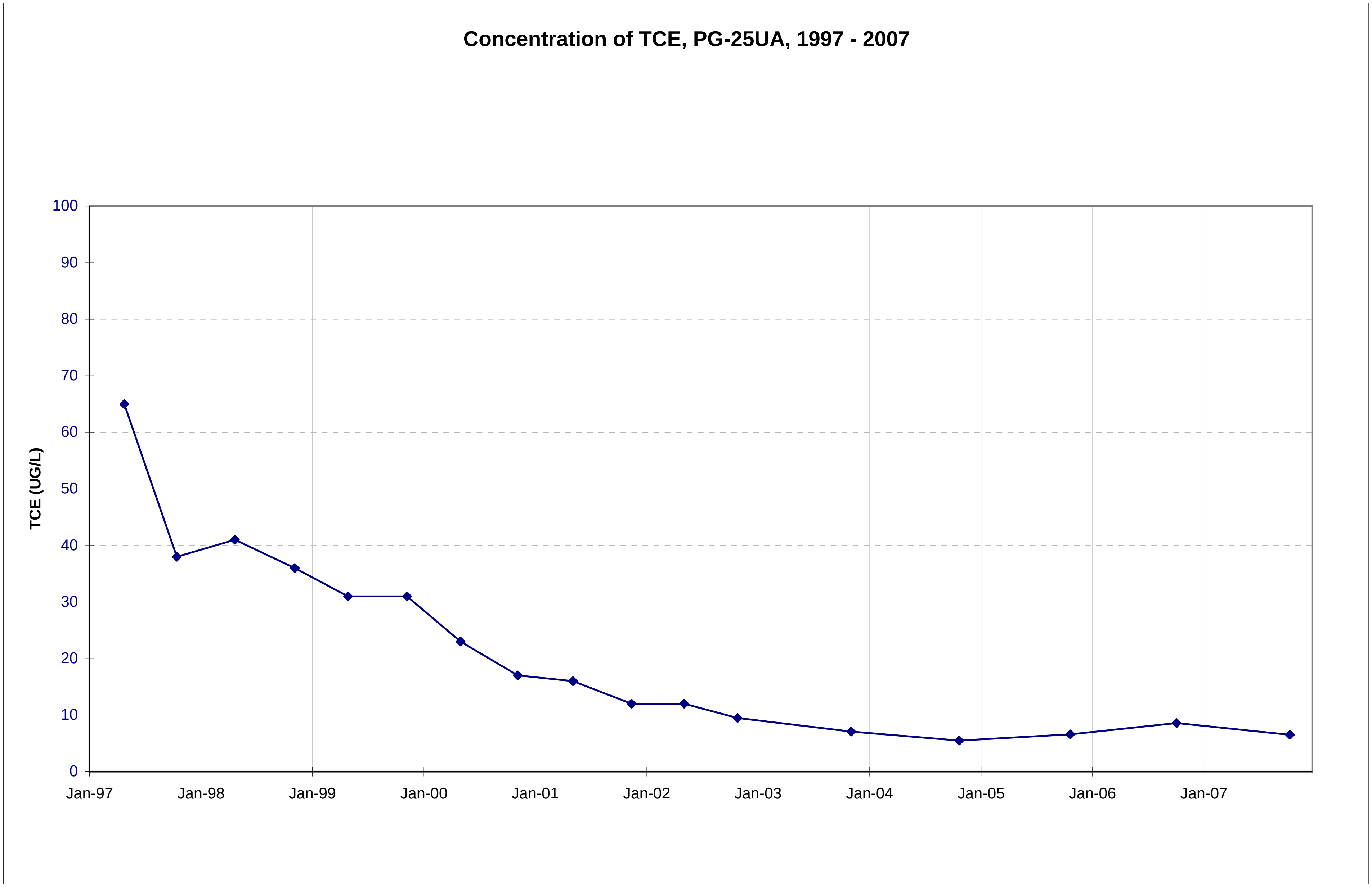
Jan-05
Jan-06
Jan-07



Concentration of TCE, PG-23UA, 1997 - 2007
TCE (UG/L)
0
10
20
30
40
50
60
70
80
90
100
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07


Concentration of TCE, PG-24UA, 1997 - 2007
TCE (UG/L)
100
90
80
70
60
50
40
30
20
10
0
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07



Concentration of TCE, PG-25UA, 1997 - 2007
TCE (UG/L)
0
10
20
30
40
50
60
70
80
90
100
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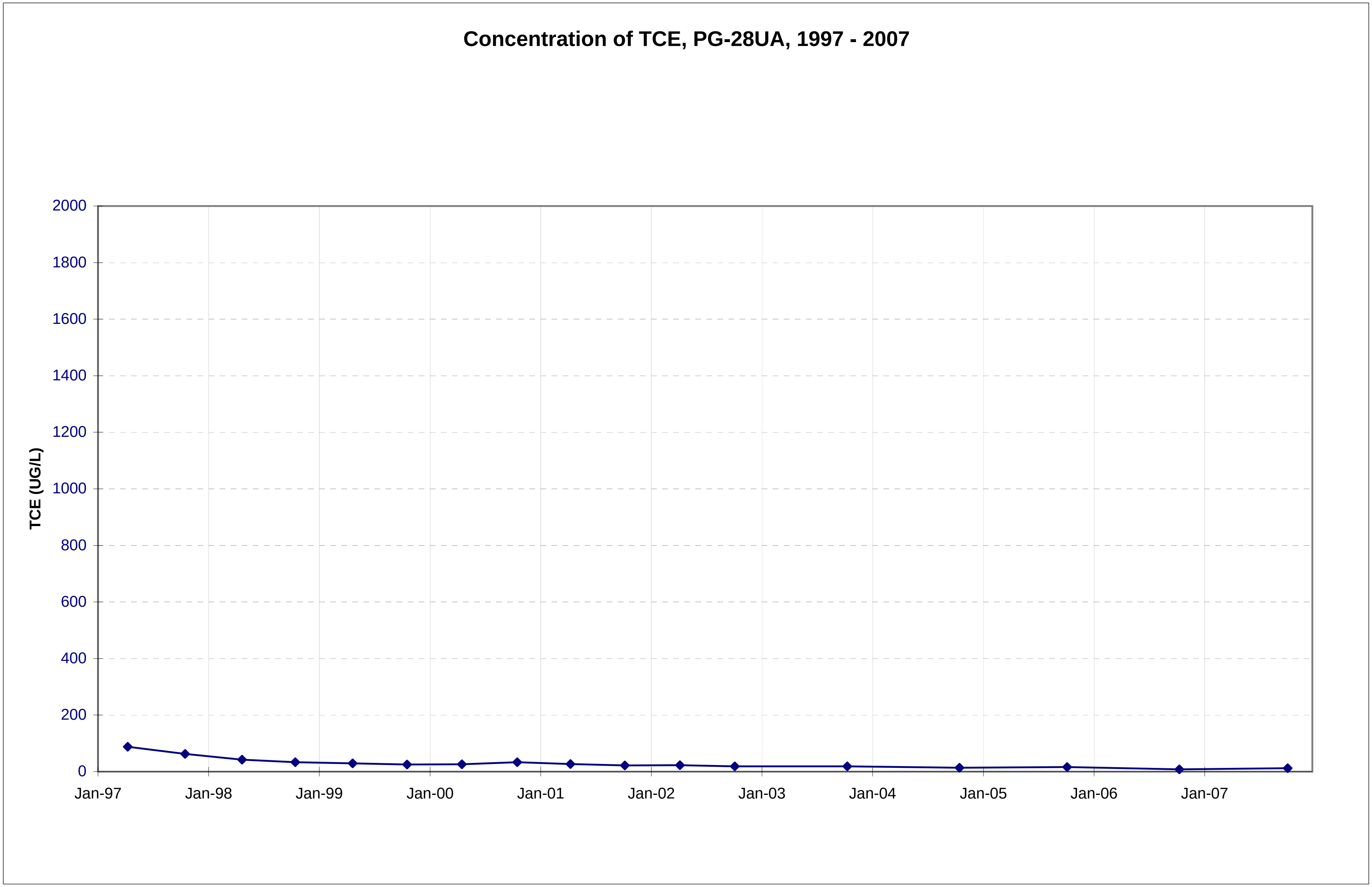
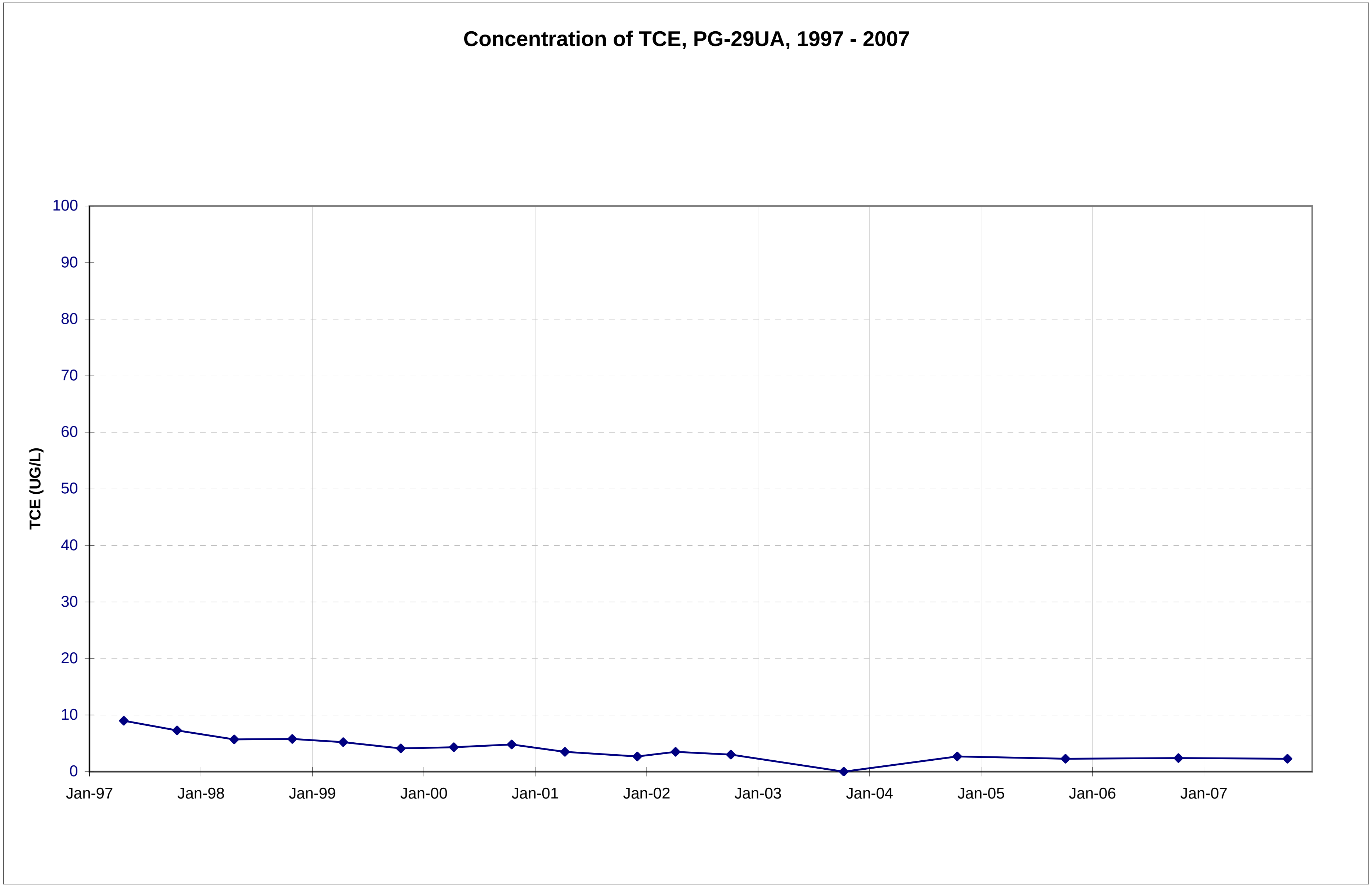
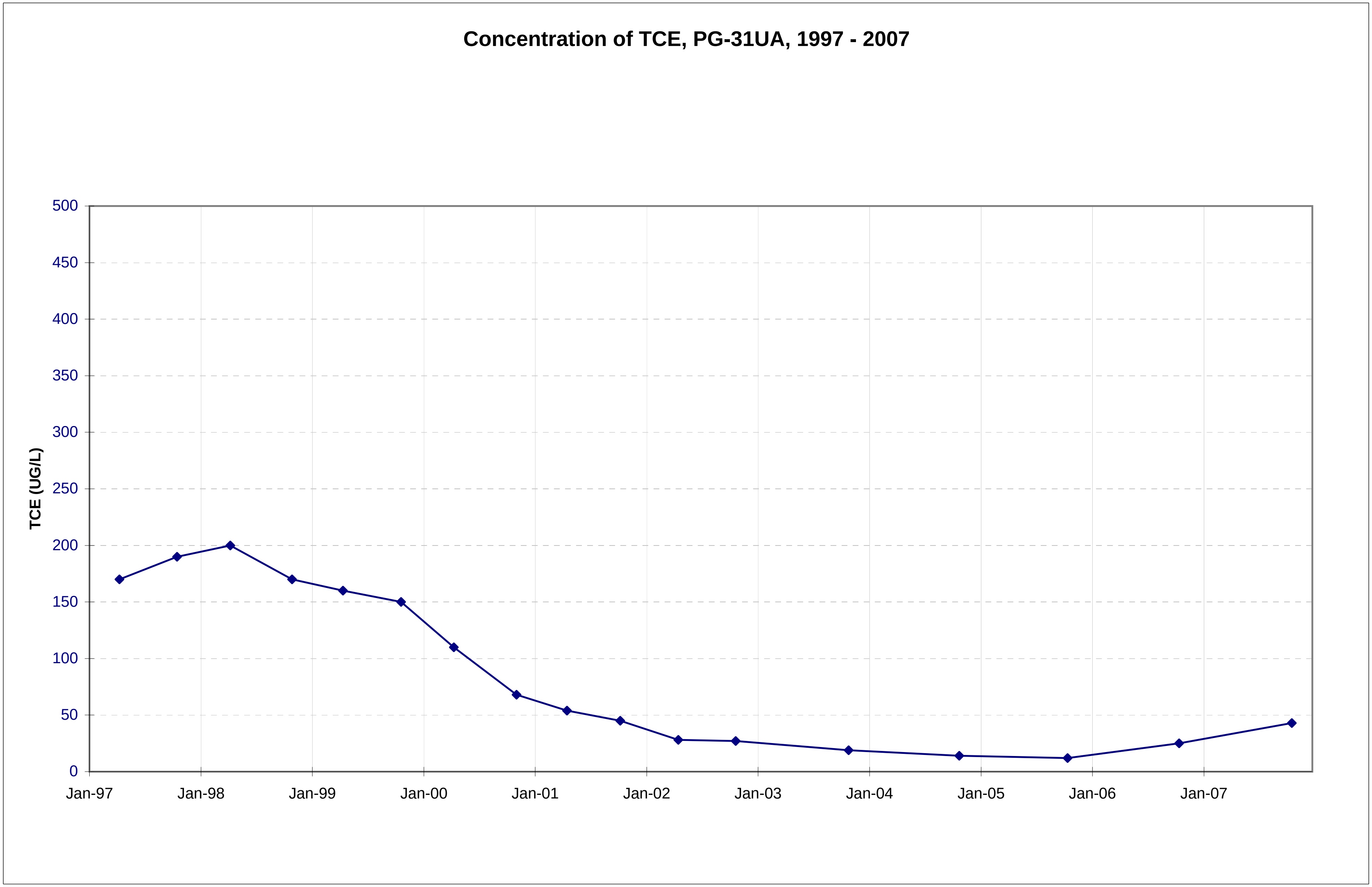
Jan-05
Jan-06
Jan-07



Concentration of TCE, PG-28UA, 1997 - 2007
TCE (UG/L)
2000
1800
1600
1400
1200
1000
800
600
400
200
0
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07


Concentration of TCE, PG-29UA, 1997 - 2007
TCE (UG/L)
100
90
80
70
60
50
40
30
20
10
0
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07



Concentration of TCE, PG-31UA, 1997 - 2007
TCE (UG/L)
500
450
400
350
300
250
200
150
100
50
0
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
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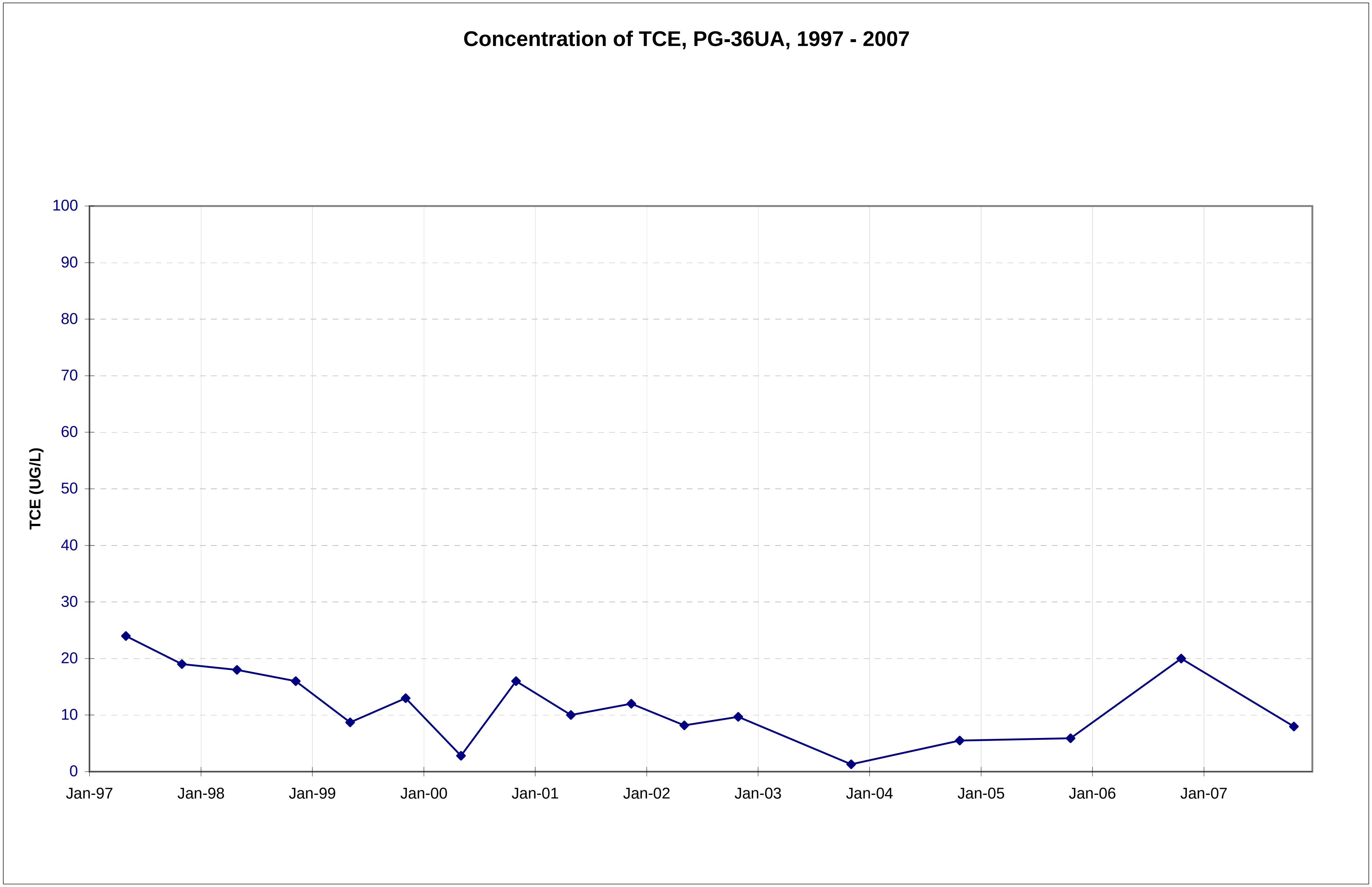
Jan-06
Jan-07



Concentration of TCE, PG-36UA, 1997 - 2007
TCE (UG/L)
0
10
20
30
40
50
60
70
80
90
100
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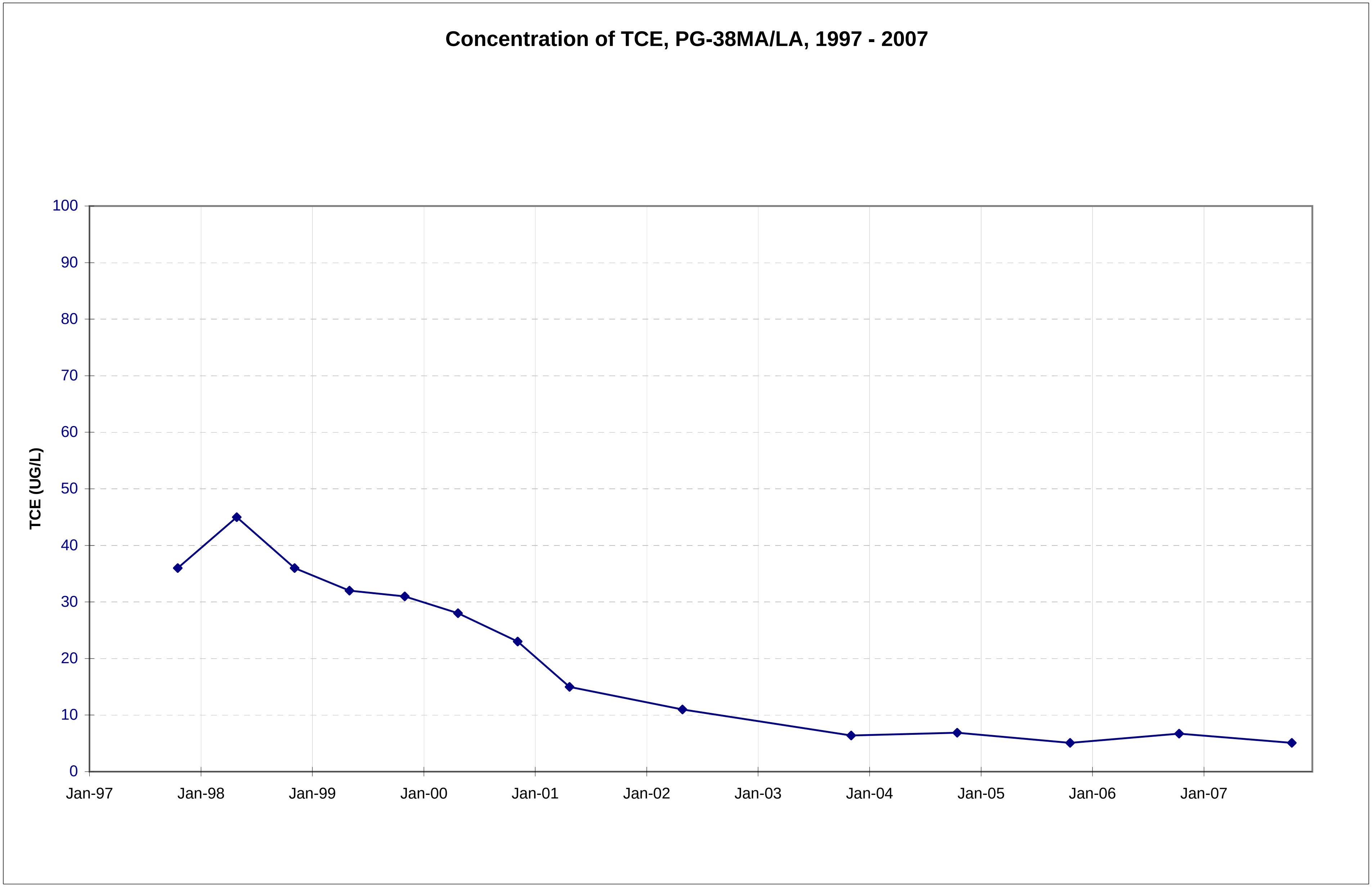
Jan-05
Jan-06
Jan-07


Concentration of TCE, PG-38MA/LA, 1997 - 2007
TCE (UG/L)
100
90
80
70
60
50
40
30
20
10
0
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Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
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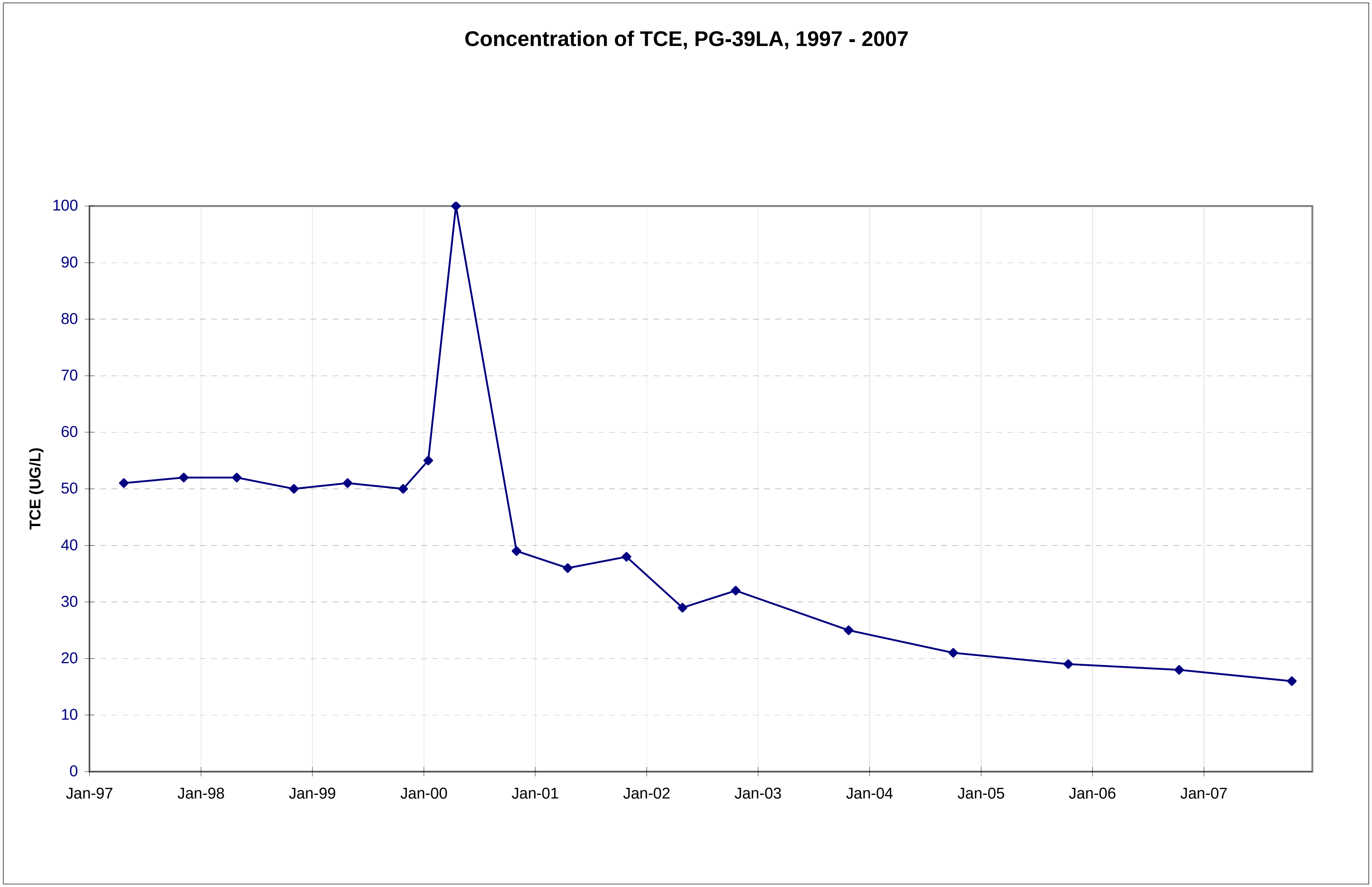
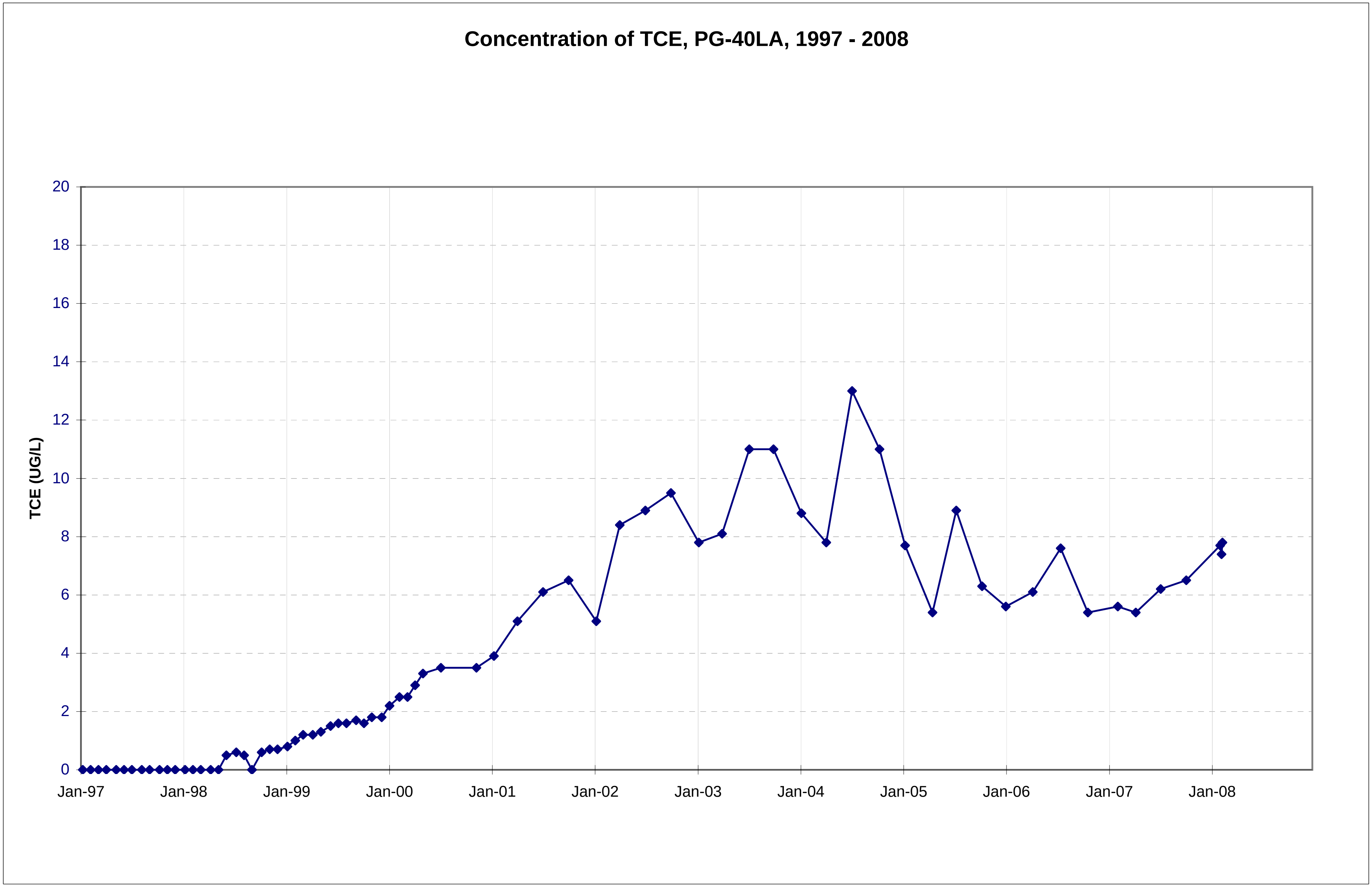
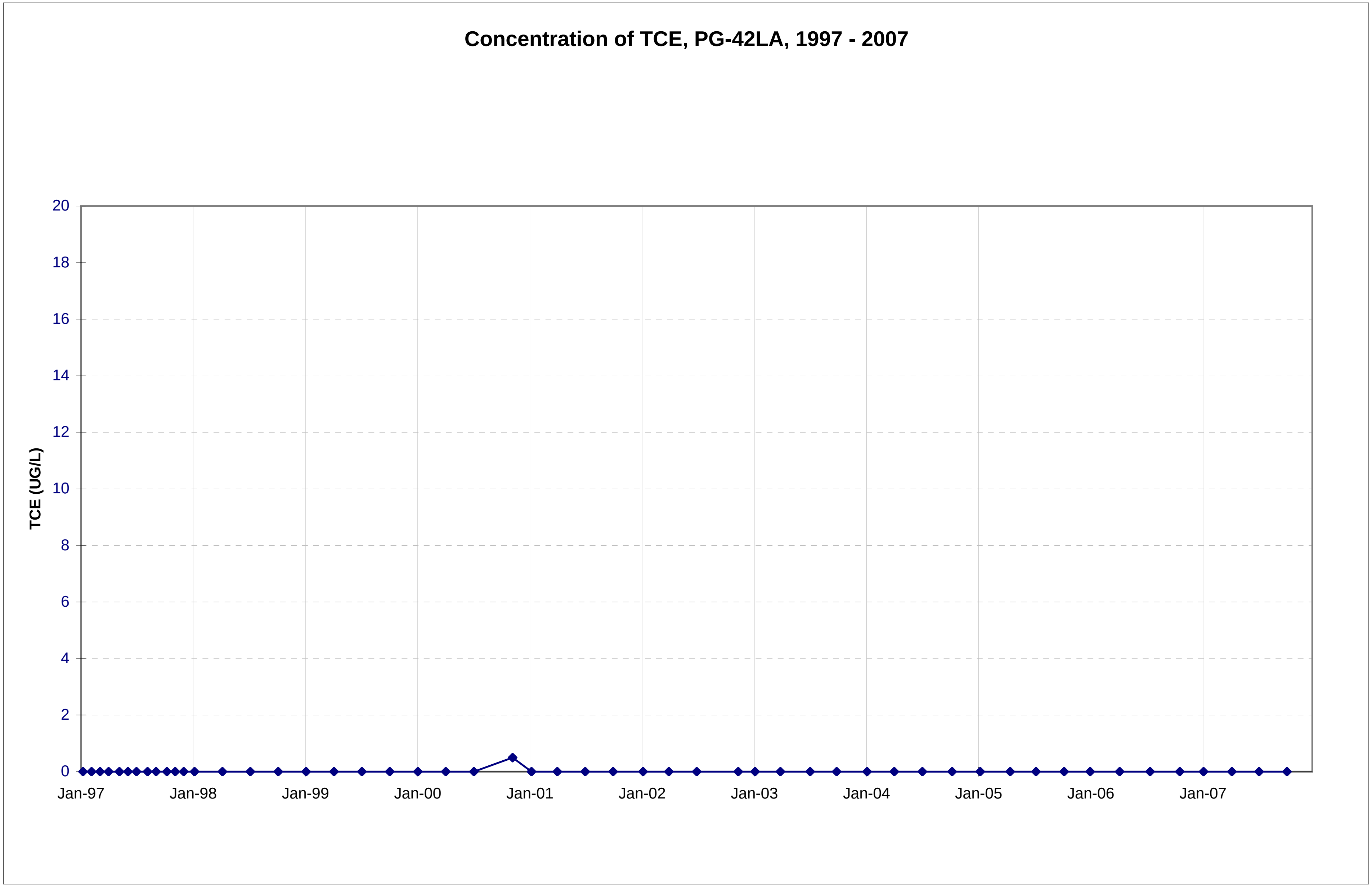
Jan-05
Jan-06
Jan-07



Concentration of TCE, PG-39LA, 1997 - 2007
TCE (UG/L)
100
90
80
70
60
50
40
30
20
10
0
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07


Concentration of TCE, PG-40LA, 1997 - 2008
TCE (UG/L)
20
18
16
14
12
10
8
6
4
2
0
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08



Concentration of TCE, PG-42LA, 1997 - 2007
TCE (UG/L)
0
2
4
6
8
10
12
14
16
18
20
Jan-97
Jan-98
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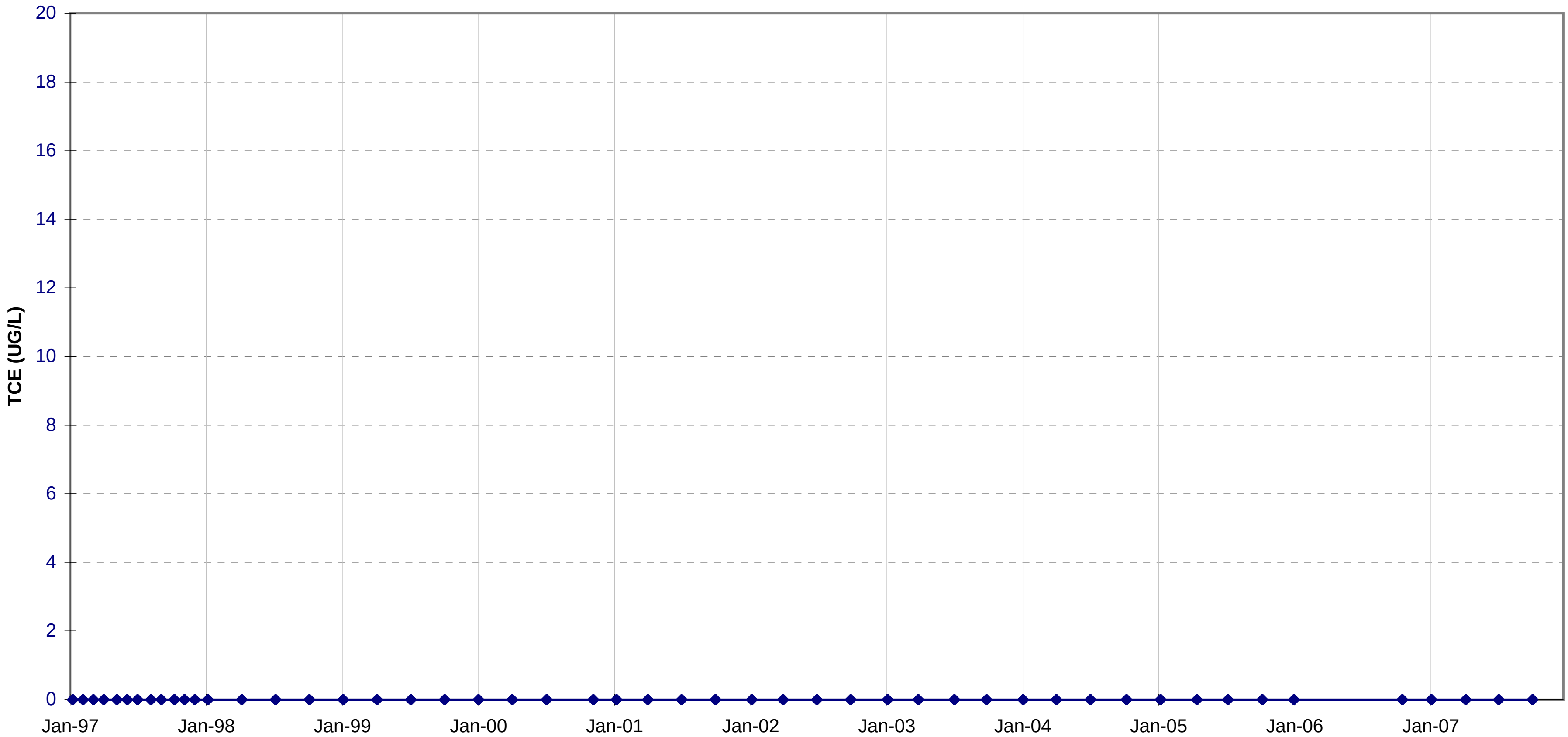
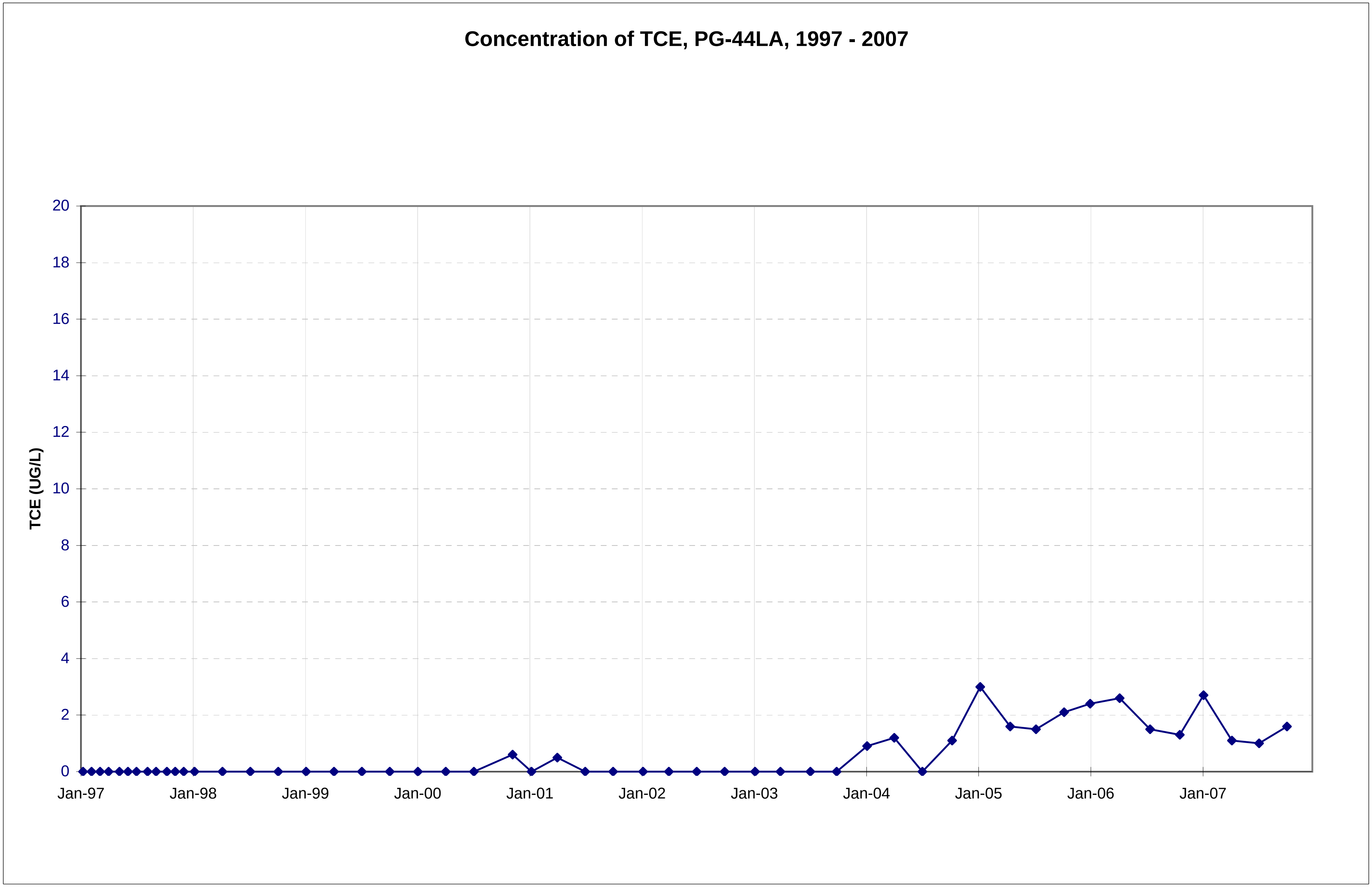
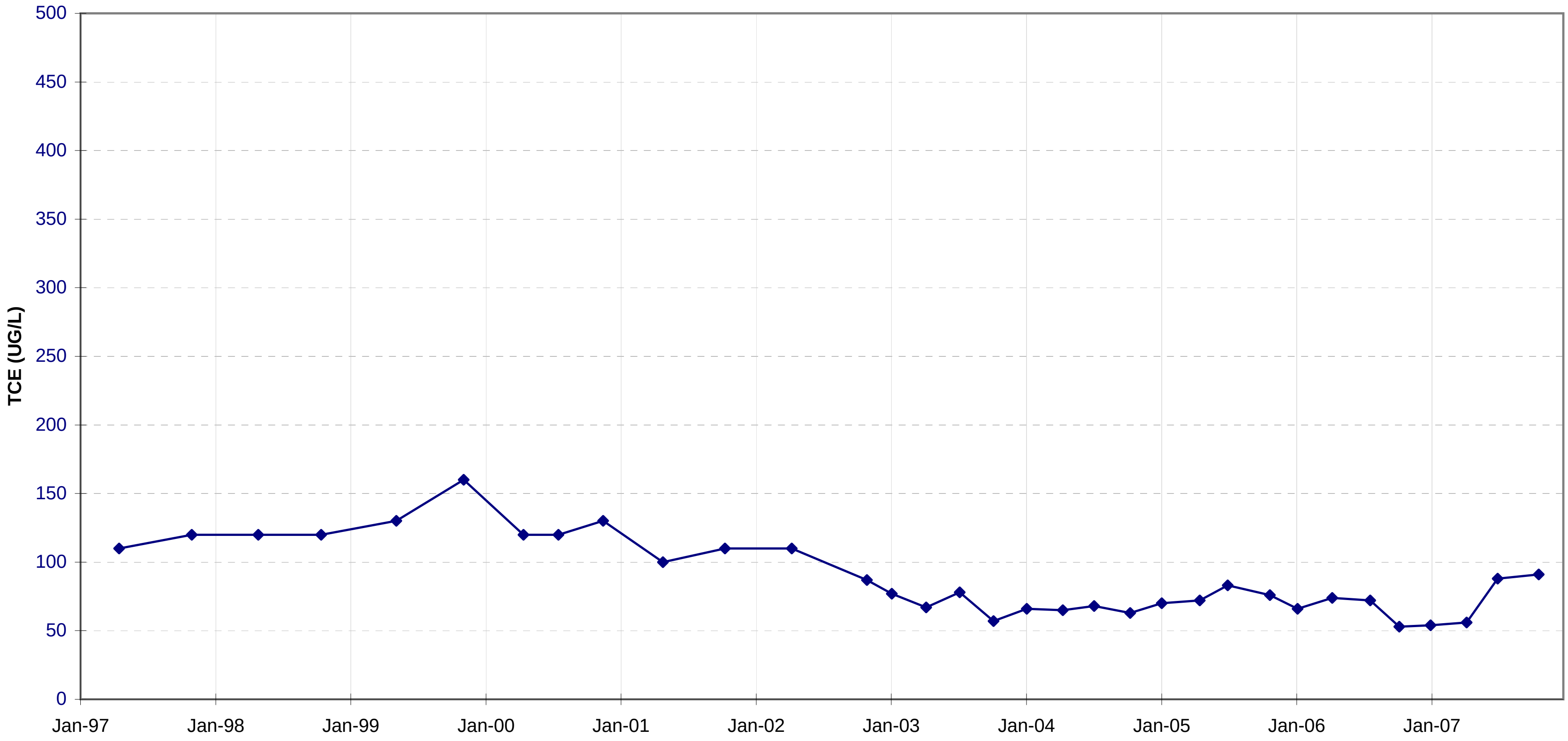
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

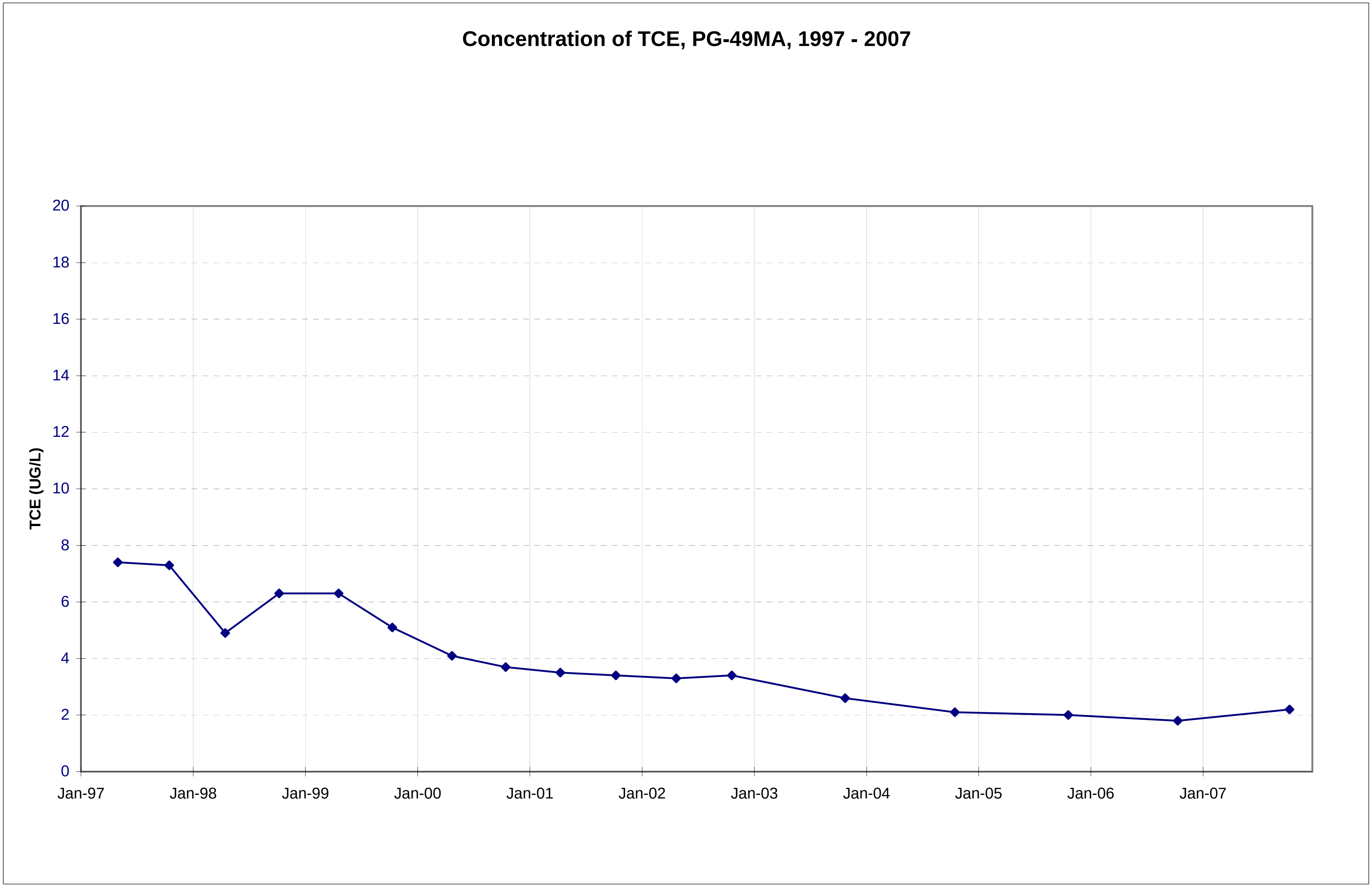
Concentration of TCE, PG-43LA, 1997 - 2007




Concentration of TCE, PG-44LA, 1997 - 2007
TCE (UG/L)
20
18
16
14
12
10
8
6
4
2
0
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

Concentration of TCE, PG-48MA, 1997 - 2007





Concentration of TCE, PG-49MA, 1997 - 2007
TCE (UG/L)
0
2
4
6
8
10
12
14
16
18
20
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Jan-99
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Jan-01
Jan-02
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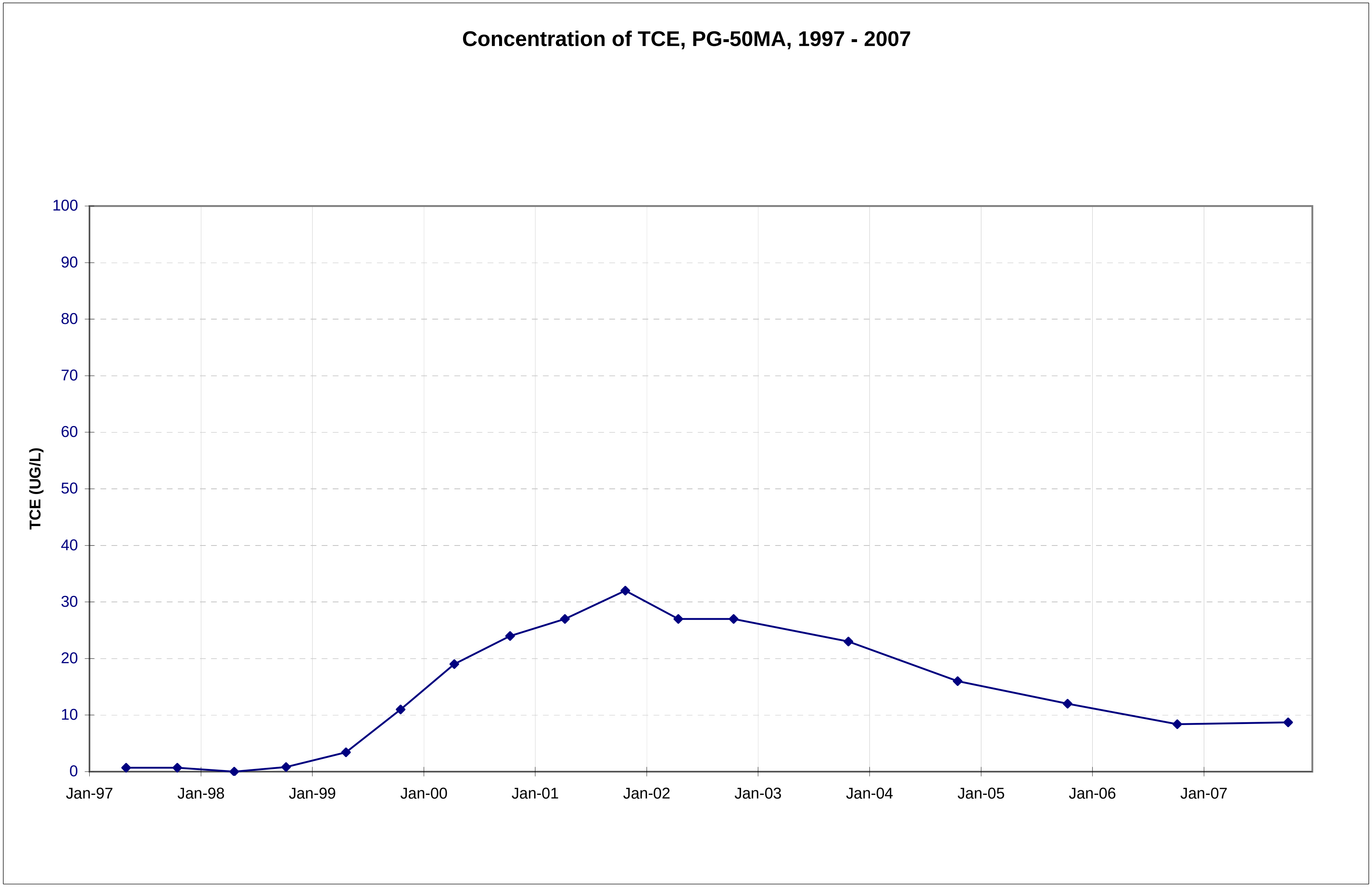
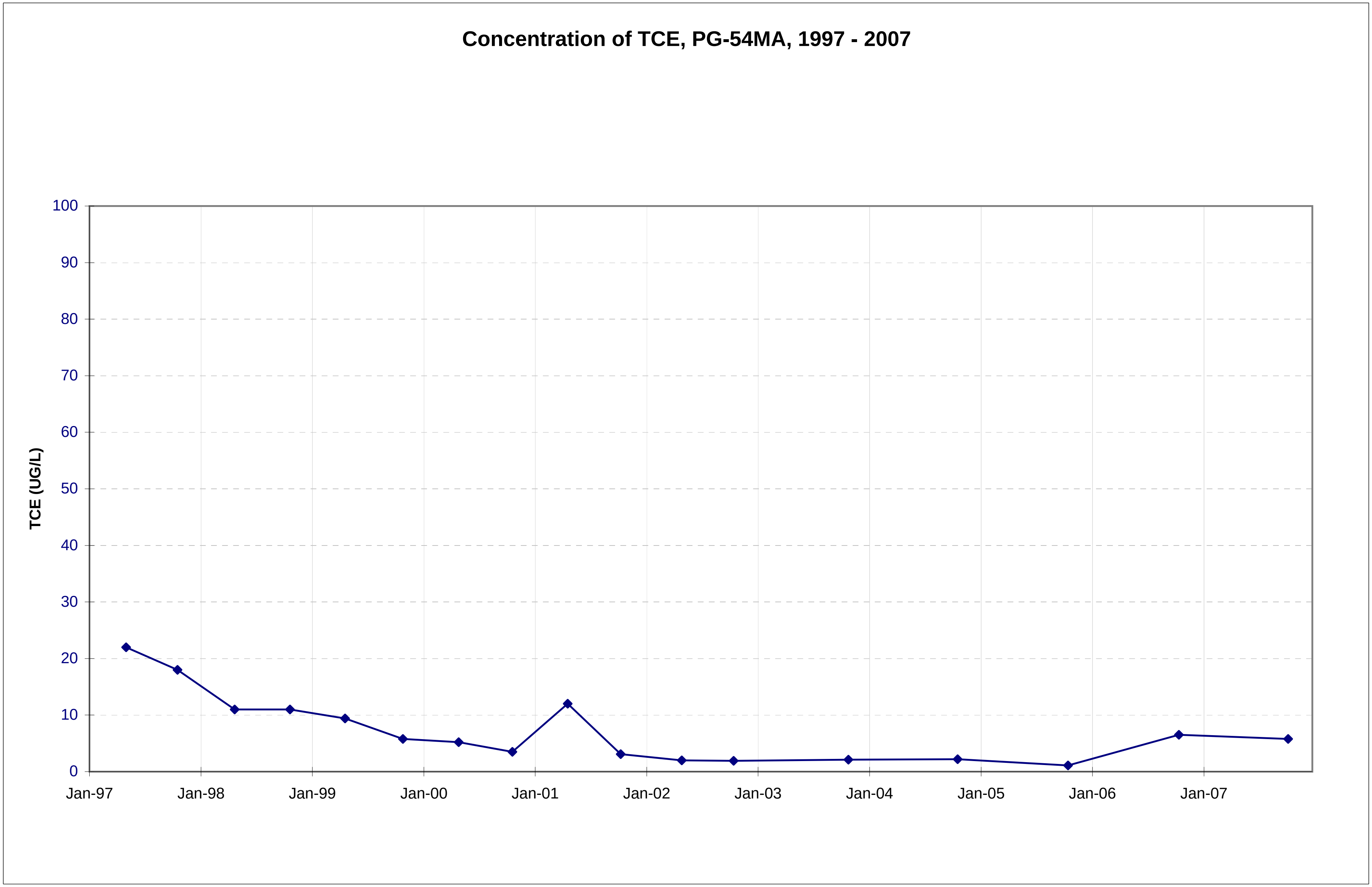
Jan-05
Jan-06
Jan-07


Concentration of TCE, PG-50MA, 1997 - 2007
TCE (UG/L)
100
90
80
70
60
50
40
30
20
10
0
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07


Concentration of TCE, PG-54MA, 1997 - 2007
TCE (UG/L)
100
90
80
70
60
50
40
30
20
10
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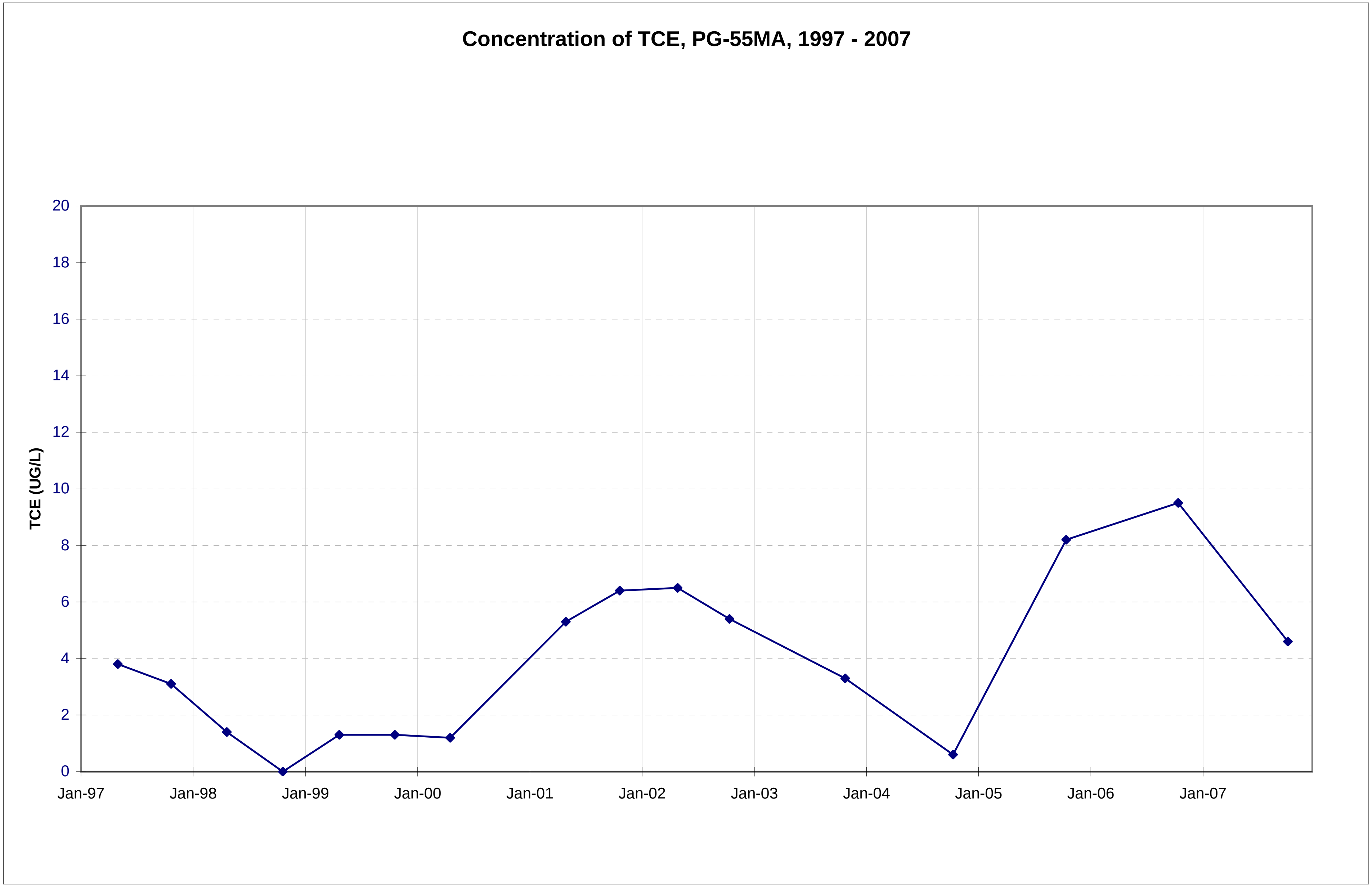
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07



Concentration of TCE, PG-55MA, 1997 - 2007
TCE (UG/L)
20
18
16
14
12
10
8
6
4
2
0
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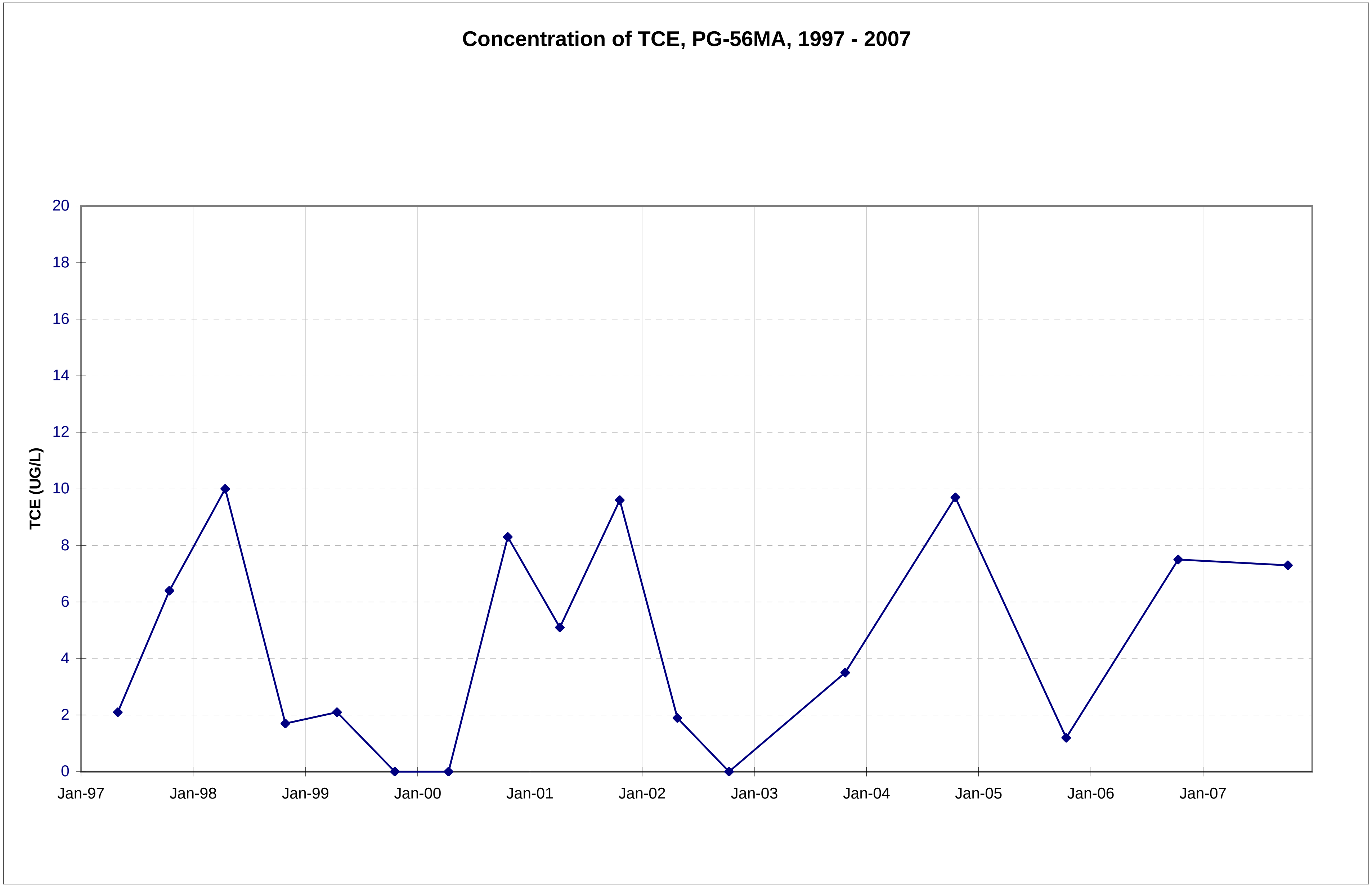
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07


Concentration of TCE, PG-56MA, 1997 - 2007
TCE (UG/L)
0
2
4
6
8
10
12
14
16
18
20
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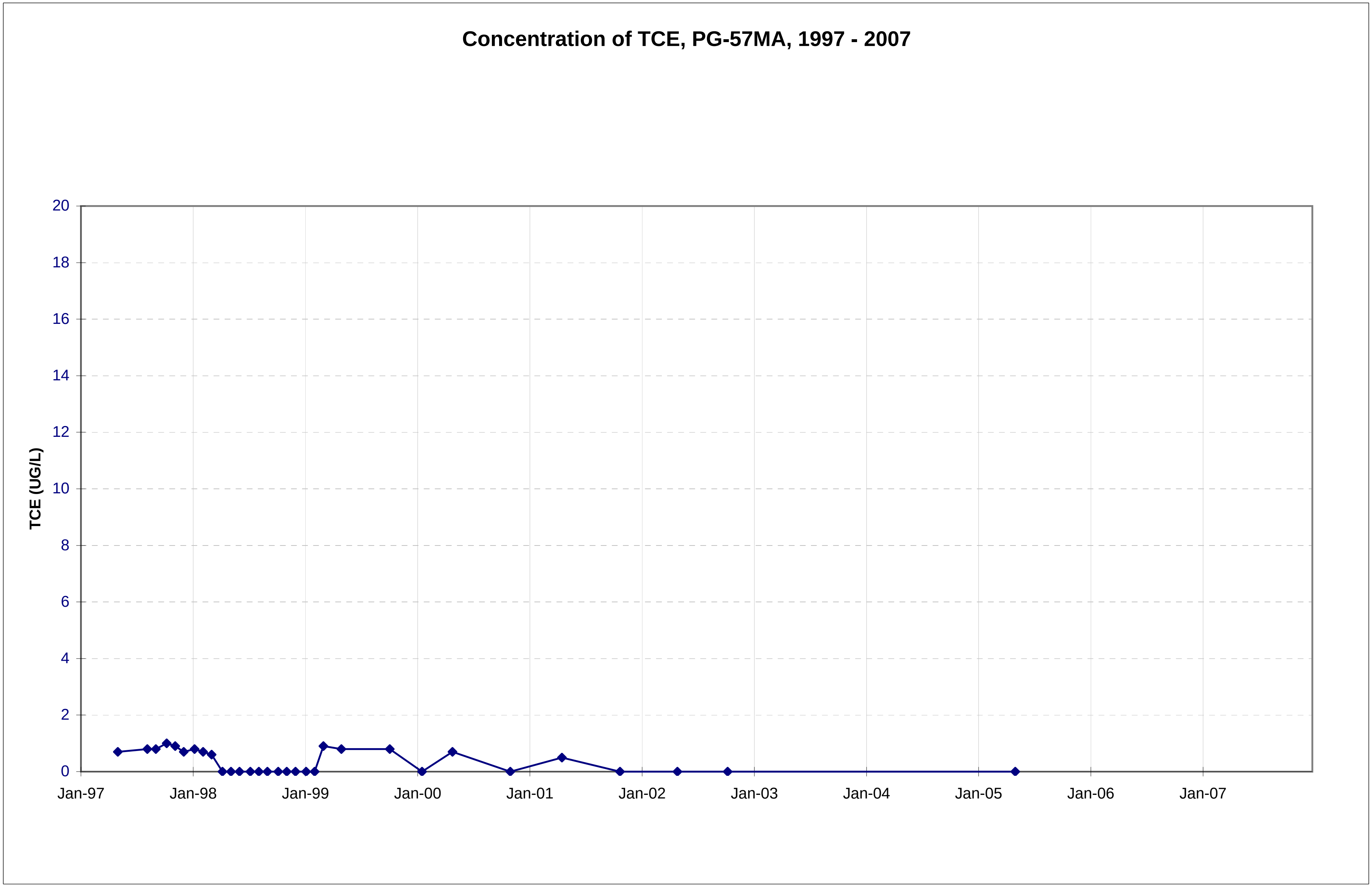
Jan-05
Jan-06
Jan-07



Concentration of TCE, PG-57MA, 1997 - 2007
TCE (UG/L)
20
18
16
14
12
10
8
6
4
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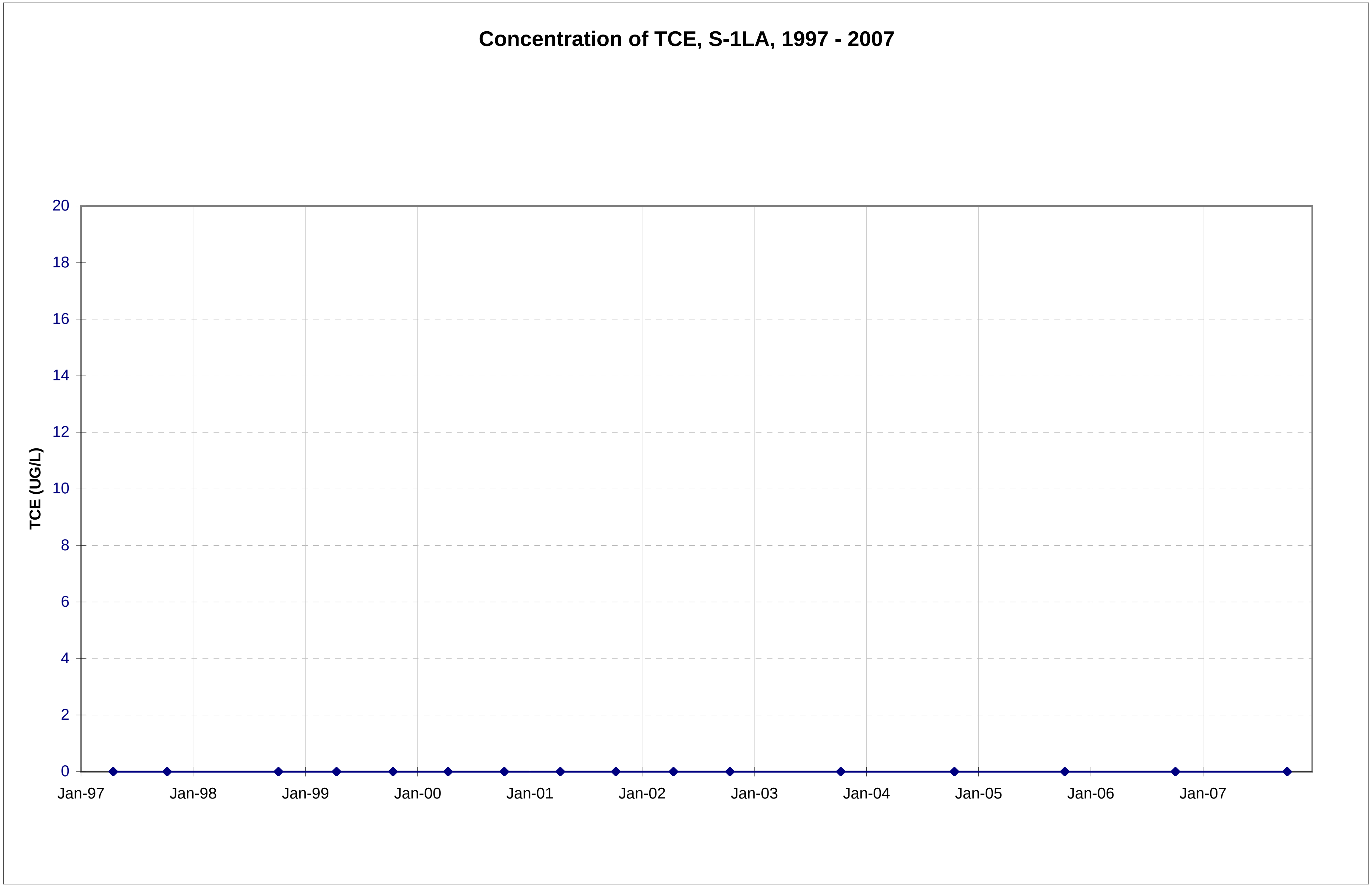
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07


Concentration of TCE, S-1LA, 1997 - 2007
TCE (UG/L)
0
2
4
6
8
10
12
14
16
18
20
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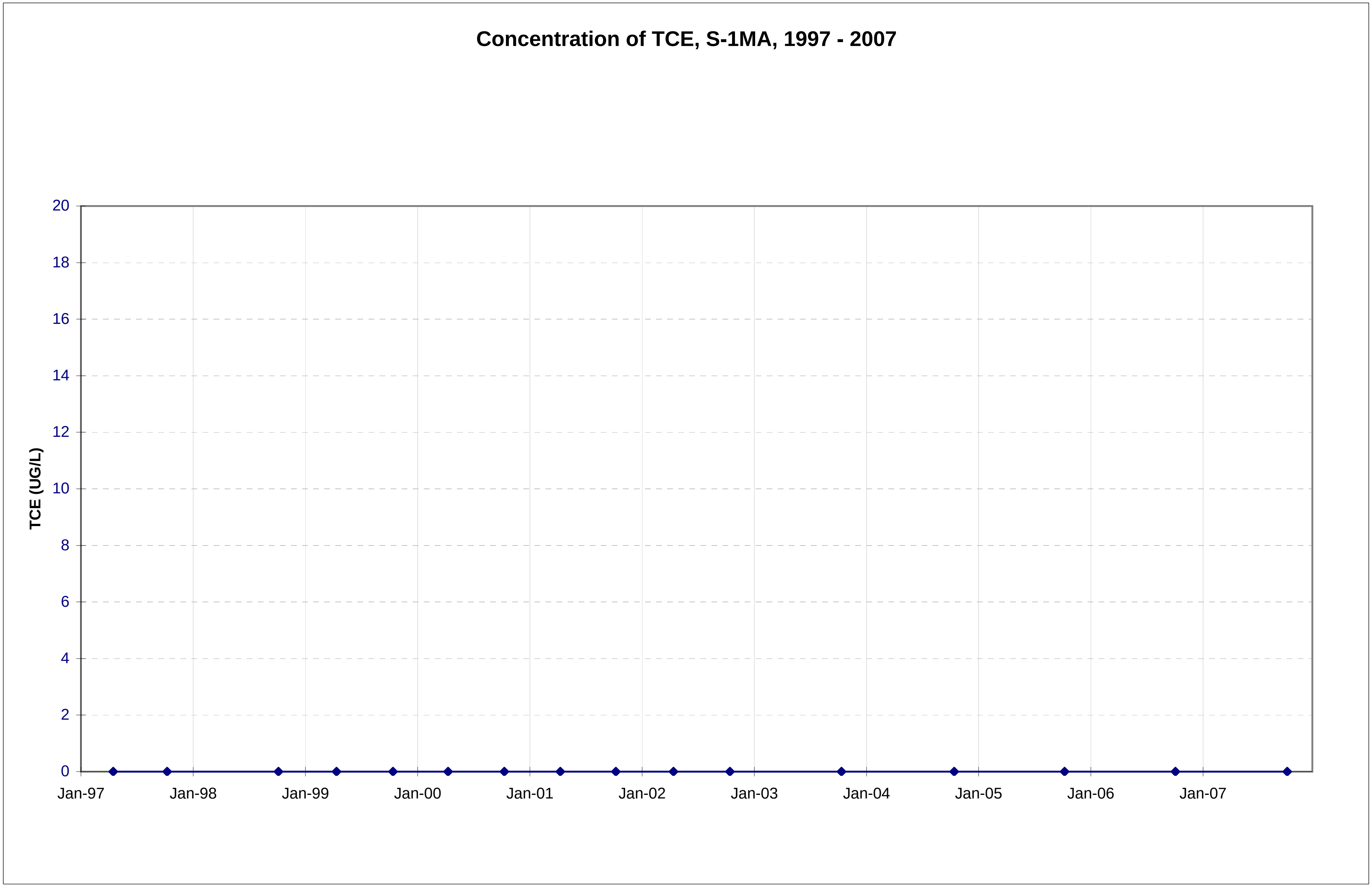
Jan-05
Jan-06
Jan-07


Concentration of TCE, S-1MA, 1997 - 2007
TCE (UG/L)
20
18
16
14
12
10
8
6
4
2
0
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
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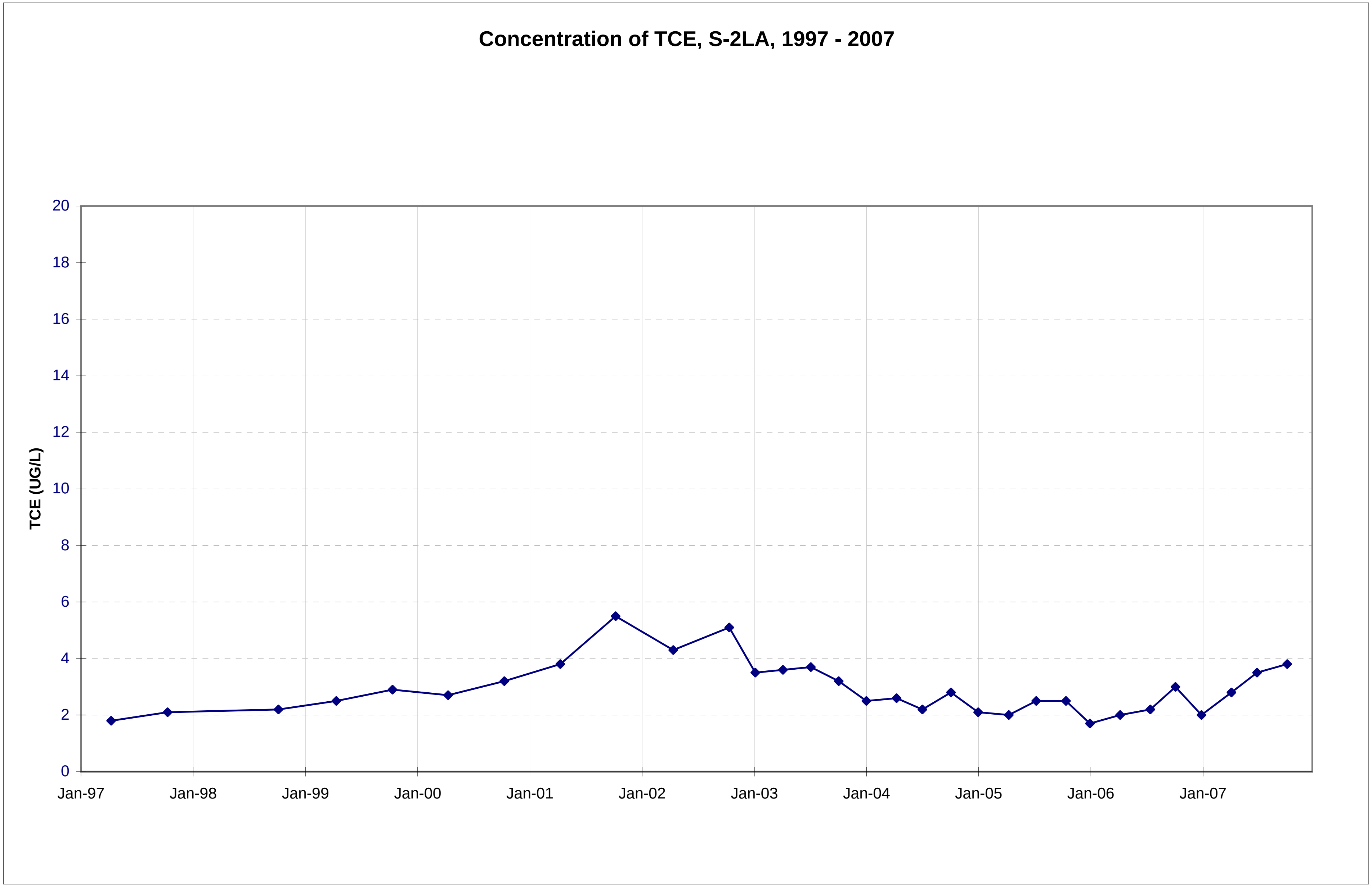
Jan-07


Concentration of TCE, S-2LA, 1997 - 2007
TCE (UG/L)
20
18
16
14
12
10
8
6
4
2
0
Jan-97
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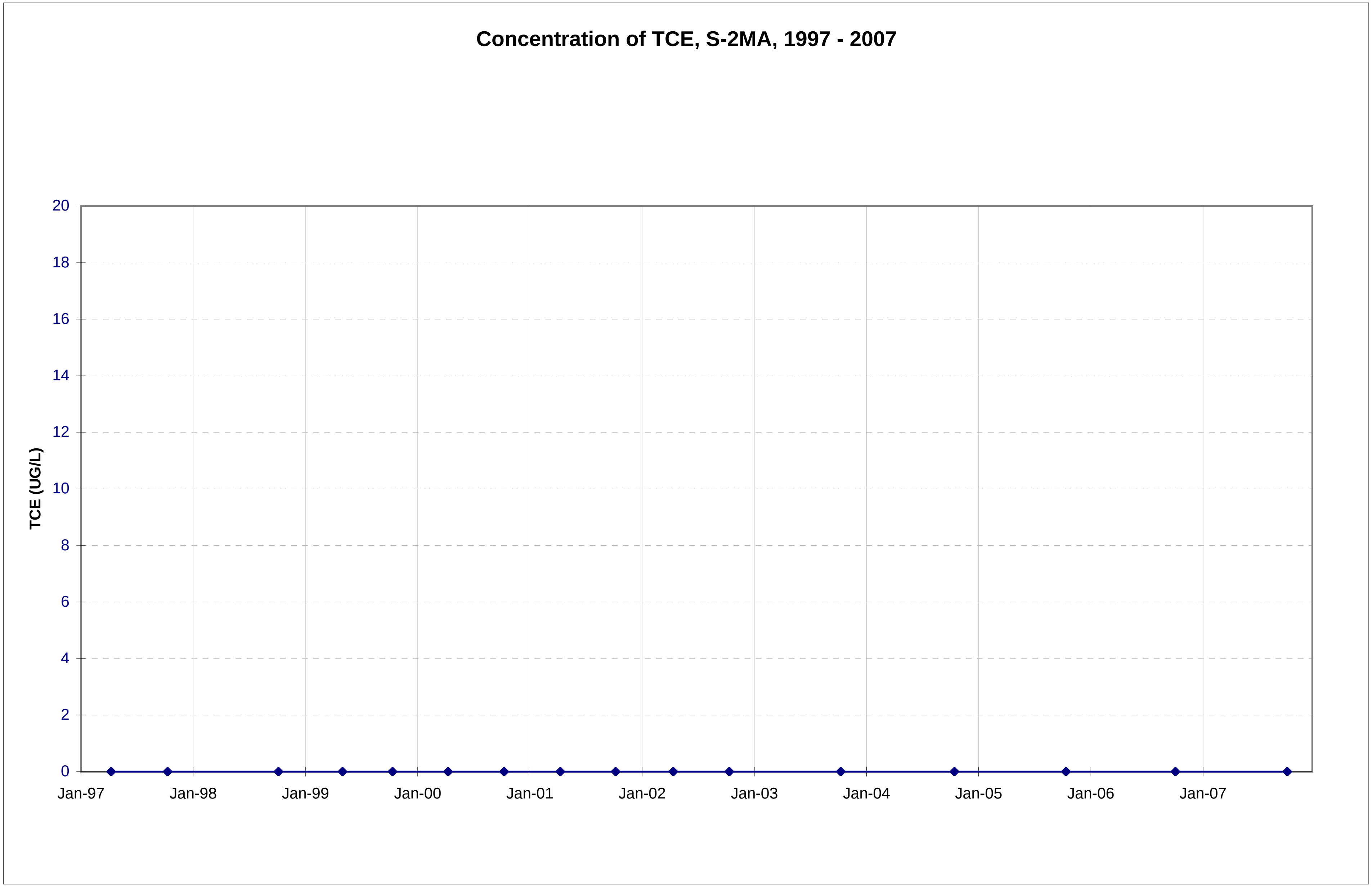
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07


Concentration of TCE, S-2MA, 1997 - 2007
TCE (UG/L)
0
2
4
6
8
10
12
14
16
18
20
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Jan-05
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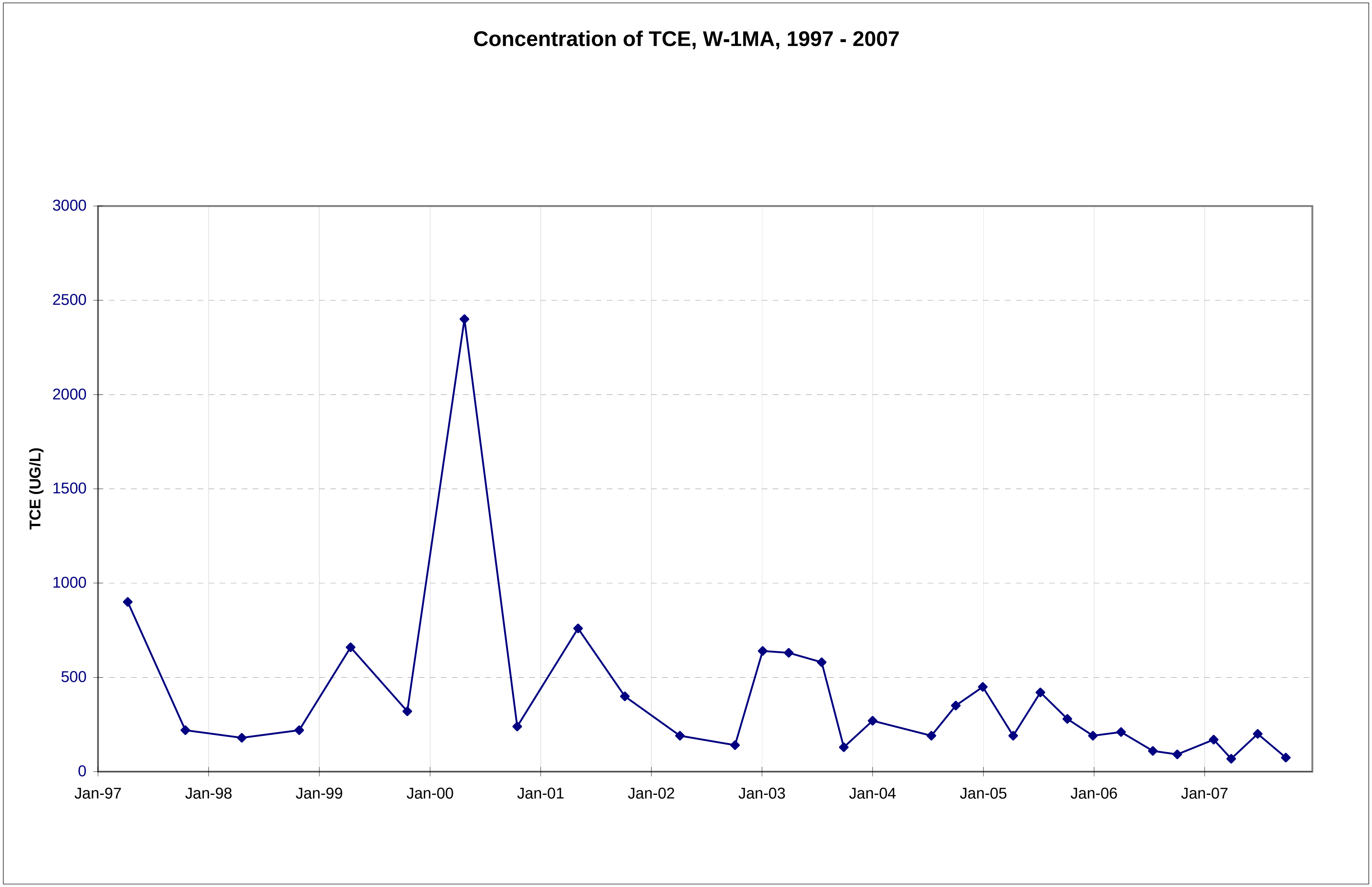
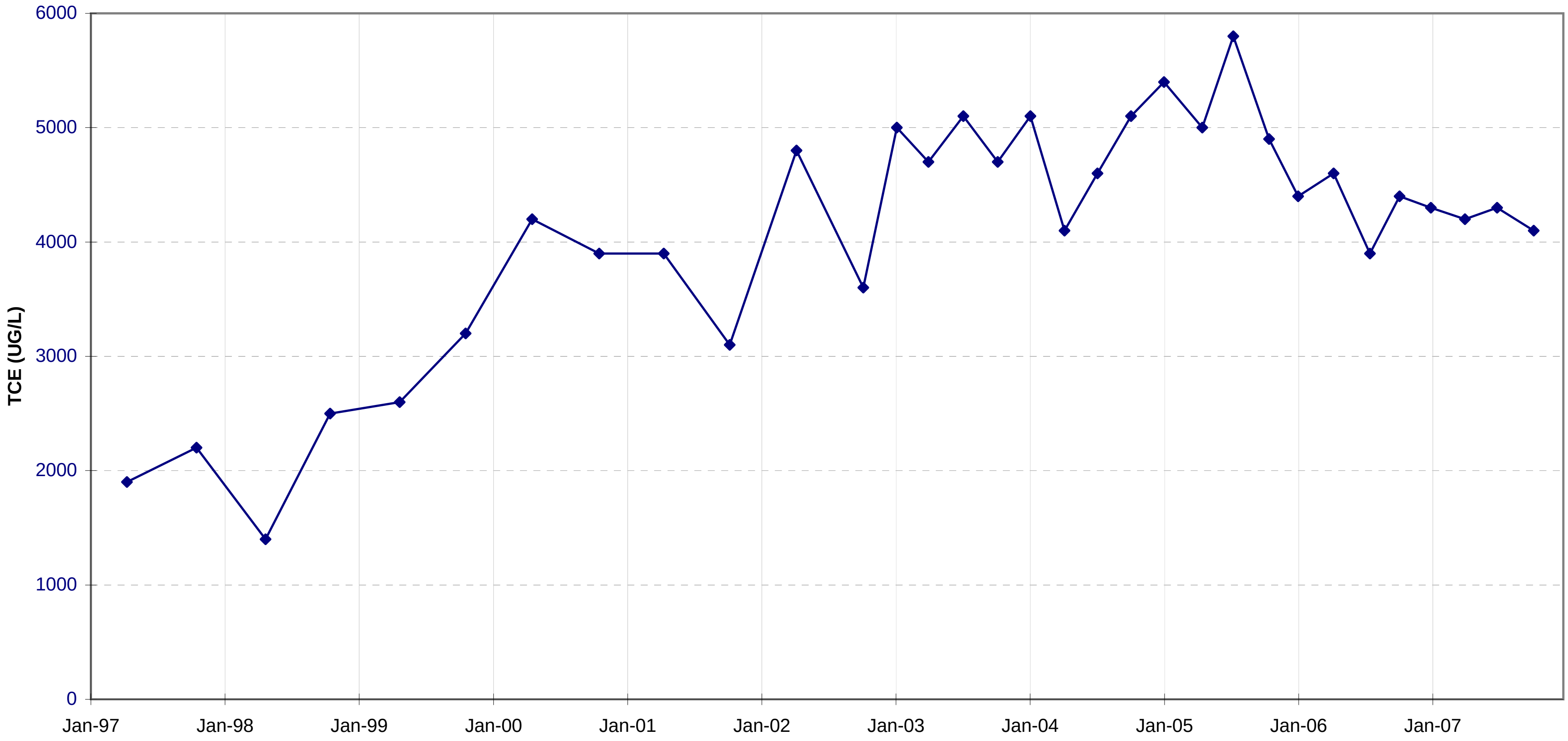
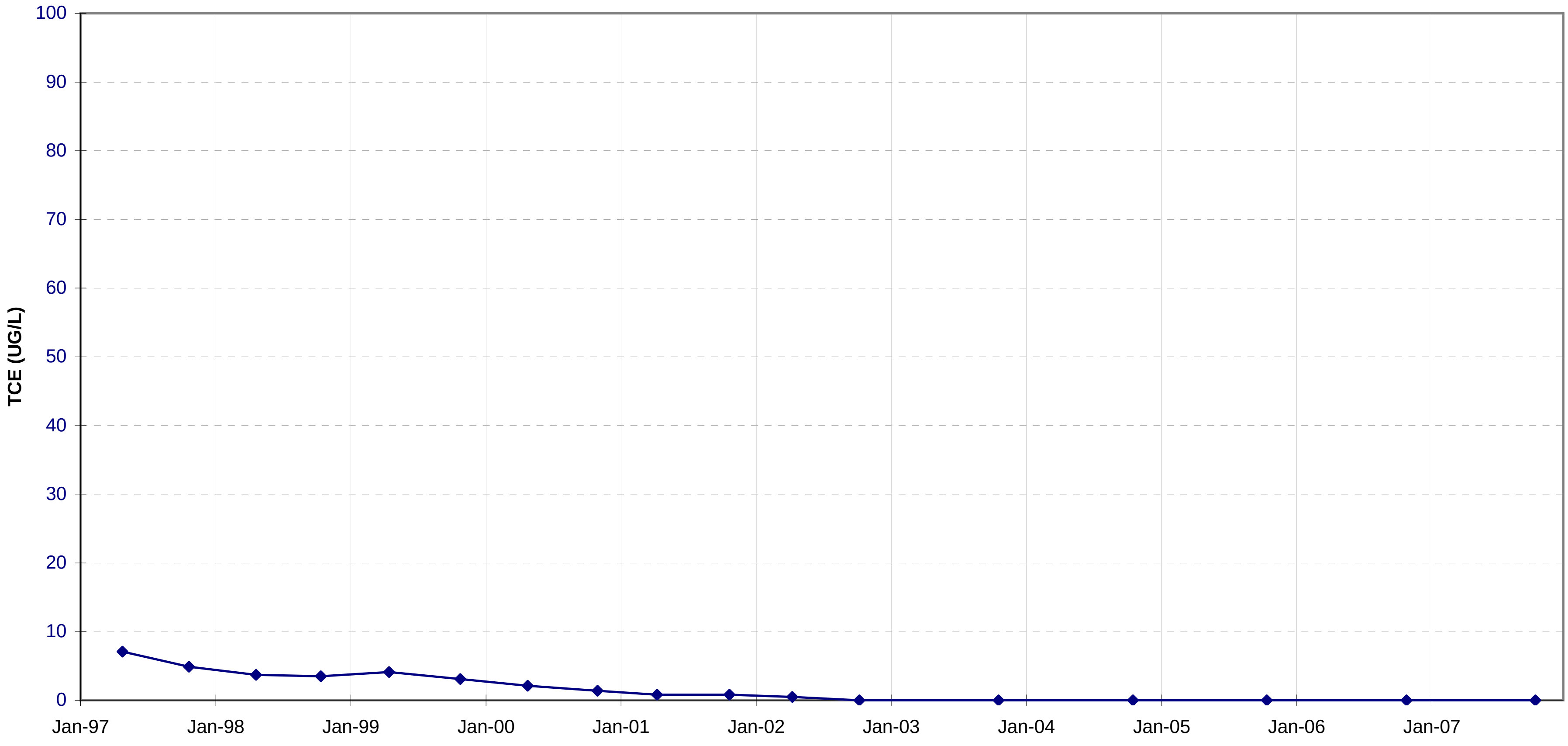
Jan-07


Concentration of TCE, W-1MA, 1997 - 2007
TCE (UG/L)
3000
2500
2000
1500
1000
500
0
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07

Concentration of TCE, W-2MA, 1997 - 2007



Concentration of TCE, W-3UA, 1997 - 2007



APPENDIX E

SITE INSPECTION REPORTS FOR MILLER ROAD TREATMENT FACILITY,
AREA 7 GROUNDWATER EXTRACTION AND TREATMENT SYSTEM, AND
AREA 12 GROUNDWATER EXTRACTION AND TREATMENT SYSTEM

INSPECTION REPORT
Groundwater Treatment Plants

North Indian Bend Wash
Superfund Site

Prepared for:
U.S. Environmental Protection Agency
Region IX

Prepared by:
NIBW Participating Companies
February 28, 2008

North Indian Bend Wash Superfund Site

INSPECTION REPORT
Groundwater Treatment Plants
North Indian Bend Wash Superfund Site
Scottsdale, Arizona

1.0 INTRODUCTION

This report documents the activities and findings for the North Indian Bend Wash (NIBW) groundwater treatment plant inspections conducted in accordance with Section VI.B.4.d of the NIBW Statement of Work (SOW). The purpose of the inspections, as described in the SOW, is to identify malfunctions, deterioration, operator practices or errors, and discharges that may be causing of could result in a release of untreated groundwater. The inspections were coordinated and conducted by the NIBW Participating Companies (PCs) and attended by representatives of U.S. Environmental Protection Agency (EPA).

2.0 OVERVIEW

The groundwater remedy for the NIBW Superfund Site addresses aquifer restoration by monitoring, containment, and treatment of groundwater affected by volatile organic compounds (VOCs) that are the following five NIBW contaminants of concern (COCs): trichloroethene (TCE), tetrachloroethene (PCE), 1,1-dichloroethene (DCE), 1,1,1-trichloroethane (TCA), and chloroform. Treatment of the NIBW COCs is to levels set forth in the Amended Consent Decree (ACD). Four separate groundwater extraction and treatment systems were constructed to extract and treat NIBW COC-affected groundwater at the Site. These systems are referred to as the Central Groundwater Treatment Facility (CGTF), Miller Road Treatment Facility (MRTF), Area 7 Groundwater Extraction and Treatment System (GWETS), and Area 12 GWETS.

Complete descriptions of the individual facilities and associated operation and maintenance (O&M) activities are presented in the “Feasibility Study Addendum, North Indian Bend Wash Superfund Site”, dated November 15, 2000 (FSA), “Record of Decision Amendment – Final Operable Unit, Indian Bend Wash Area”, dated September 27, 2002 (AROD), and the respective individual draft O&M Plans for each treatment plant.

The NIBW treatment facilities are operated in accordance with the procedures described in the individual draft O&M Plans.

3.0 INPECTION PROCEDURES

3.1 Routine Inspections

The operators routinely inspect the entire treatment facilities on a routine basis, either daily or weekly. Also, routine data logging by hand or by computer is performed. The operators review the data for trends and anomalies to evaluate the overall operation of the treatment systems.

Due to the size and disposition of treated water to the respective drinking water systems, the NIBW PCs coordinate and conduct operational review meetings on an approximate monthly basis for the CGTF and MRTF. These meetings include discussions of current operations issues, routine maintenance issues, planning for upcoming non-routine maintenance such as column cleaning, and equipment and/or systems upgrades. The NIBW PCs may also perform a facility walk-through during these operational review meetings

Monthly and/or quarterly data and operating reports are submitted by the facility operators. These reports are reviewed by the NIBW PCs to document operation and maintenance issues and confirm treatment effectiveness of each plant.

3.2 Annual Inspections

Inspections are conducted annually in accordance with the SOW and Amended Consent Decree. The inspections for the Area 7 and Area 12 GWETS were conducted on November 13, 2007 and for MRTF and CGTF on December 13, 2007. This is the fourth such inspection.

Prior to conducting the 2007 annual inspections, the PCs developed a checklist for each facility. The inspection checklists are designed to guide the inspection team through identification and evaluation of the major components and processes associated with each treatment facility. The completed checklists for each facility are provided as attachments to this document. .

The schedule of site inspections is coordinated in advance with EPA and Arizona Department of Environmental Quality in order to provide an opportunity for regulatory agency participation. The inspections included a facility walk-through, interview with the primary operator, visual inspections of the treatment equipment, waste storage areas and groundwater containment systems. Description of the inspections and results follows.

4.0 FACILITY INSPECTIONS

4.1 Area 7 Groundwater Extraction and Treatment System

NIBW Area 7 is located at the southeast corner of 75th Street and 2nd Street in Scottsdale. The groundwater treatment system is located in the southeast corner of Area 7 in an area approximately 56 feet by 75 feet. The facility includes the treatment system and control equipment. Groundwater extraction is performed using three remote MAU groundwater extraction wells (7EX-3aMA, 7EX-4MA, and 7EX-5MA) and one UAU groundwater extraction well (7EX-1UA). Treated water is discharged to the UAU using two remote groundwater reinjection wells (7IN-1UA and 7IN-2UA).

The major components of the GWETS include submersible water pumps, well head equipment, piping from the well heads to the treatment plant, a 5,000-gallon equalization tank, an ultraviolet oxidation (UV/Ox) reactor, a low-profile air stripper, and a vapor-phase GAC treatment system.

During normal operation, treated groundwater is reinjected into the UAU via wells 7IN-1UA and 7IN-2UA. The GWETS has capabilities to discharge treated groundwater to the COS sanitary sewer under limited circumstances during non-routine maintenance or following major work on the system.

In its current configuration, the groundwater treatment system is designed to treat up to 500 gpm of NIBW COC-affected groundwater with an overall hydraulic capacity of 570 gpm. As described in the Design Report, the Area 7 GWETS was designed to treat groundwater from a maximum anticipated TCE concentration of approximately 7,000 ppb to less than the MCL.

The groundwater treatment plant includes a building, which houses the major treatment equipment such as the UV/Ox and air stripper systems. A control room is integral with the building and is equipped with the motor control center (MCC) and HMI, main control center, and motor drives.

An equalization tank and GAC adsorbers are located outside the building on the north side of the treatment plant area. A double-contained hydrogen peroxide tank is located on the south side of the treatment plant area in a contained concrete foundation with a six-inch berm. The entire treatment plant area is paved with concrete and surrounded by a two-inch berm for containment.

The treatment plant is surrounded by a block wall for security. Access to the plant is provided through three steel gates, two located on the west wall and one on the south wall.

4.1.1 Area 7 Maintenance and Condition

The Area 7 GWETS is maintained by an engineering consultant who makes twice daily remote checks on the system and visits the GWETS on a weekly basis. The operator makes weekly inspections of the equipment and grounds at Area 7. The operator also maintains operations logs and data spreadsheets at the facilities. The logs and spreadsheets were presented for review by the inspection team.

The Area 7 GWETS has operated up to 89 percent of the time for the last year. Down time is attributed to maintenance and power outages.

Based on operating data, the Area 7 GWETS has consistently met performance criteria set forth in the ACD.

No releases of untreated groundwater occurred at Area 7 in the last year.

In general, the facility appeared clean with no apparent leaks or significant deterioration. The equipment is clean, well marked, and maintained.

The last groundwater extraction pump to be replaced was in well 7EX-5MA in October 2006 due to excessive wear. Well 7EX-5MA produces a lot of sand which causes wear on the pump.

The UV/Ox system appeared to be operating as designed during the inspection. The operator noted that the power on the lamps had been turned down to minimize breaking the lamps. The operator indicated that this can extend the lamp life up to approximately 9,000 hours. There was some minor corrosion noted at the bottom of the stainless steel shell on Reactor 2. This did not appear to present a problem. This issue was noted during the 2006 annual inspection and did not appear significantly different in 2007.

The blower appeared to run smoothly. The blower is operated via a variable frequency drive which maintains the speed of the fan. The operator indicated that the blower has performed well, and no service has been required. The belts are inspected semi-annually and replaced as needed.

Scale removal was last performed on the air stripper columns in April 2005.

The short section of ducting is insulated, and therefore, little or no condensation is collected in the system.

The process control system is monitored continuously by the computer. The operator indicated that the alarms are tested during routine operation.

4.1.2 Results

Based on the inspection of the Area 7 GWETS, no treatment performance problems, hazards, significant deterioration, or equipment malfunctions were apparent.

4.2 Area 12 Groundwater Extraction and Treatment System

The Area 12 GWETS is located at the former Motorola facility (now, General Dynamics) at 8201 East McDowell Road in Scottsdale, Arizona. At this site, the air stripping tower is located just east of the Chemical Operations Building, south of the Granite Reef Road entrance to the former Motorola facility on the west side of Granite Reef Road. Groundwater is extracted from two wells MEX-1MA and SRP well 23.6E-6.0N, also known as the Granite Reef well. The Granite Reef well is owned and operated by SRP. The treated groundwater is discharged to SRP's irrigation distribution system through a connection to an SRP lateral pipeline located in Granite Reef Road.

The Area 12 GWETS consists of two extraction wells and appurtenant pumping equipment, an air stripping system, and off-gas treatment system. Groundwater is pumped from the wells in individual pipes to a common manifold near the air stripper. The air stripper is a counter-current forced-draft, packed column where the NIBW COCs are removed from the water. The off-gas treatment is vapor-phase granular activated carbon (GAC) polishing system. The treated groundwater is discharged to SRP's irrigation distribution system under agreement between SRP and Motorola.

The Area 12 GWETS is designed to treat up to 1,850 gpm of groundwater and reduce NIBW COCs from a maximum concentration of 300 ug/L of TCE to less than its MCL.

Located at the treatment plant is the main control panel containing the system programmable logic controller (PLC). Each well pump system is connected to the PLC using an Ethernet connection with signals traveling via a fiber optic pathway. Each well site also contains a PLC to control the individual remote well operation. The remote well PLCs also interface with SRP systems to monitor and control well operation.

A small control room which is located at the treatment plant houses the HMI and various plant specific records. The HMI consists of a computer that supports a graphical user interface, logs operating data, and allows remote operation and data transfer using a telephone modem.

4.2.1 Area 12 Maintenance and Condition

The Area 12 GWETS is maintained by an engineering consultant who makes daily remote checks on the system via computer and approximately 10 visits to the GWETS each month. During the visits, the operator makes inspections of the equipment and grounds at Area 12. The operator also maintains operations logs and data spreadsheets at the facilities. The logs and spreadsheets were presented for review by the inspection team. The safety coordinator for the General Dynamics facility makes three-times-weekly walk-throughs at the Area 12 GWETS.

Except for the scheduled maintenance shut down in January and early February due to the SRP dry-up, the Area 12 GWETS has operated approximately 76 percent of the time for the last year. Down time is attributed to maintenance and power outages. Additional down time was due to City of Tempe work on the discharge lateral.

Based on operating data, the Area 12 GWETS has consistently met performance criteria set forth in the ACD.

In general, the facility appeared clean with no apparent leaks or significant deterioration. The equipment is clean, well marked, and maintained.

The pump in well MEX-1 was repaired during the first quarter of 2007.

The blower appeared to run smoothly. The operator indicated that the blower has performed well, and no service has been required.

Scale removal was last performed on the air stripper columns in January 2007.

The process control system is monitored continuously by the computer. The operator indicated that the alarms are routinely tested when the system shuts down.

4.2.2 Results

Based on the inspection of the Area 12 GWETS, no treatment performance problems, hazards, significant deterioration, or equipment malfunctions were apparent.

4.3 Miller Road Treatment Facility

MRTF is located at 5975 Miller Road, at the southeast corner of the intersection of Miller Road and McDonald Drive in Scottsdale, Arizona. The facility is owned and operated by Arizona American Water (AAW). The plant consists of an individual treatment train for each of the three MRTF groundwater production wells (PV-14, PV-15, and PCX-1). Each treatment train includes a counter-current, forced-draft air stripper with appurtenant equipment such as air blower. Each air stripper column was designed to remove the NIBW COCs to below MCLs at flow rates up to 2,100 gpm with an overall capacity of 6,300 gpm. The facility was designed for operational flexibility through a common tower influent header to allow water from specific wells to be routed to any one of the three columns.

The treated water is collected in a sump at the bottom of each air stripper column where the water can be directed to either the Arizona Canal or to the common clearwell. Treated water in the clearwell is pumped, using an array of three vertical turbine pumps, to AAW's Paradise Valley Arsenic Treatment Facility (PVARF)

The off-gas from the air stripper passes through a mist eliminator; then through ducting to one of three GAC adsorbers before discharge to the atmosphere.

Well PV-14 currently is pumped directly to PVARF since NIBW COCs have not been detected in groundwater samples collected from that well. PV-15 and PCX-1 are treated by air stripping at MRTF.

All of the treatment equipment except the GAC adsorbers is located inside the treatment building. The treatment building consists of several rooms including the air stripper room which houses the air stripper columns, blowers, and distribution pumps; the electrical room which supports the motor control center (MCCs), starters, Remote Terminal units (RTUs), Remote Input/Output (RIO) cabinets, transformers, and other electrical equipment; and the control room, where the human machine interface (HMI), laboratory, and records are located.

For security and aesthetics, the facility is surrounded by a masonry wall with several access gates.

4.3.1 MRTF Maintenance and Condition

The MRTF is maintained by the operator provided by AAW. The operator makes daily inspections of the equipment and grounds at MRTF. The operator also maintains operations logs and data spreadsheets at the facility. The logs and spreadsheets were presented for review by the inspection team. Data gaps were observed in air flow rate trends. This information may indicate that the logging utility in the computer or the air flow rate measurement/transmitting instruments were not working properly. AAW indicated that the flow rate transmitters were replaced in December 2007.

The operator indicated that the plant operated a total of approximately 99+ percent of the time over the last year. This information does not account for the shutdown of the facility in November and December due to concerns regarding effluent sample results from the October 15 sampling.

On November 7, laboratory analytical data from Tower 2 effluent and MRTF effluent samples (taken on October 15th) indicated concentrations of TCE above the treatment standards. A written report by the NIBW PCs was submitted to EPA and ADEQ on November 14, 2007 and an investigation is on-going

Except for the Tower 2 effluent and MRTF effluent sample results from October 15, MRTF has consistently met performance criteria set forth in the ACD in 2007.

In general, the facility appeared clean. The equipment generally appeared clean, marked, and maintained. Some housekeeping issues were noted. These primarily consisted of electrical equipment strewn about in the area near the distributive pumps. In addition, evidence of corrosion was noted on some equipment.

In a previous visit on October 9 to inspect the internals of Towers 1 and 3, a small leak from near the top of Tower 2 was observed. Tower 2 was operating in place of Tower 3 at the time of the October 9 inspection. Also, during that visit a small leak at the base of Tower 2 was observed, as well. Tower 2 is typically used as a back-up air stripper in the event of maintenance on other towers. These issues will be addressed in the planned non-routine preventative maintenance.

During the October 9 inspection, the water distributors in Towers 1 and 3 were observed in good and level condition.

The pump in well PCX-1 was replaced in 2006. Well PV-15 was shutdown in May 2007 due to heavy corrosion and deterioration of the casing. Well PV-15 had remained off for well rehabilitation through the remainder of 2007.

The blowers appeared to run smoothly. Operation of the blower on Tower 3 at the time of the December inspection felt smooth and did not make unusual noises. During the October 9 inspection, the blower on Tower 2 felt smooth and no unusual noises were observed. The operator indicated that the blowers were last aligned and serviced in October 2005, but also indicated that the blowers were balanced annually.

Scale removal was last performed on the air stripper columns between March and June 2005. Visual inspection through the viewports on the air stripper during the inspection indicated heavy scaling in Towers 1 and 3, and relatively clean packing in Tower 2. Minor amounts of condensate collect in the air handling system. This is due primarily to the difference in temperatures between the air stripper offgas and ambient temperatures. The condensate is collected in the sump and discharged to the sanitary sewer.

The process control system is monitored continuously. The operator indicated that alarms are tested routinely to verify operation of the system.

The air handling system appeared tight and in good condition. The operating levers for the air dampers for treatment trains 2 and 3 appeared to move smoothly in both the open and closed positions.

4.3.2 Results

Based on the inspection at MRTF, no hazards or significant deterioration were apparent. Gaps in the air flow rate logs indicate missing data. AAW replaced the air flow rate transmitters in early December.

It should be noted that a planned non-routine preventative maintenance is scheduled for spring of 2008. The heavy scaling and other issues will be addressed during that project.

4.4 Central Groundwater Treatment Facility

Background and details of the City of Scottsdale (COS) CGTF are provided in the O&M Plan developed for this facility. The O&M Plan, approved by EPA on January 22, 2003, describes the facility, the major pieces of equipment, control strategies, and performance monitoring of the treatment plant. Design parameters and performance of CGTF have been validated and documented in the, O&M Plan and annual data reports for the NIBW Site. The following is a brief summary of the treatment plant.

The CGTF is located at 8650 E. Thomas Road in Scottsdale, Arizona at the northeast corner of Pima Park, a City municipal park. Other nearby COS facilities include the CGTF wells and Reservoir 80 into which treated water from the CGTF is discharged for beneficial use as a supply to the COS potable water system.

The CGTF uses air stripping to remove NIBW COCs, primarily trichloroethylene from groundwater. The CGTF is comprised of three separate, parallel treatment trains. Each treatment train consists of a packed column, a process air fan, and an off-gas vapor treatment system that removes NIBW COCs prior to discharge to the atmosphere. Each column has a design capacity of 3,150 gallons per minute (gpm). The overall capacity of the CGTF is approximately 9,450 gpm. The separate treatment trains allow for one or more columns to be removed from service while the other column(s) continue to operate.

Groundwater is pumped from wells COS 75A, COS 71, COS 72, and COS 31 through transmission pipelines to the CGTF. Influent water combines in a common raw water header and is evenly distributed into the available columns where it flows top-to-bottom through the column packing while airflow is pulled through the tower in a counter-current direction.

The treated water is collected in individual sumps at the bottom of each column and then flows by gravity into a common sump. The treated water is discharged to the City's potable system or to the SRP irrigation system. (The capacity of the connection to the SRP irrigation system varies based on several factors, with a current maximum of approximately 4,000 gpm.) Blending of CGTF treated water with other water supplies occurs in the potable water storage facility, Reservoir 80, just south of the site.

A process air fan is used to pull air through an intake filter then upward through the packed column counter-current to the water flow. The off-gas is directed through a mist eliminator, a natural gas-fired duct heater, and a granular activated carbon (GAC) contactor prior to discharge to the atmosphere. The duct heater reduces relative humidity prior to VOC adsorption in the GAC contactors.

The majority of the treatment equipment, except the duct heaters, GAC contactors, and chlorination equipment, is located inside the CGTF treatment building. The treatment building consists of several rooms, including: the air stripper room which houses the packed columns and process air fans; the electrical equipment room which supports the motor control centers, starters, Remote Terminal Units (RTUs), Remote Input/Output cabinets, transformers, and other electrical equipment; and the laboratory. Chlorination equipment is located in a separate building at the Reservoir 80 booster station.

For security and aesthetics, the facility is surrounded by a masonry wall with several locking access gates.

4.4.1 CGTF Maintenance and Condition

The CGTF underwent non-routine preventative maintenance and facility rehabilitation during the first half of 2007. As part of the that project, the column packing was replaced, the column walls were recoated, new air blowers were installed on each treatment train, and a 20,000 gallon hydro-pneumatic surge tank on the raw water line was installed. After completion of the rehabilitation activities in July 2007, the CGTF was restarted and extensively tested for performance. The new blower on Column 1 has had some vibration issues that are still being worked-out. Since July 2007, however, Columns 2 and 3 have operated continuously except for shutdowns due to routine maintenance.

The CGTF is maintained by a full time COS operator. The operator makes daily inspections of the equipment and grounds at CGTF. The operator also maintains operations logs and data spreadsheets at the facilities. The logs and spreadsheets were presented for review by the inspection team. Specialty staff from COS operations such as mechanics and instrumentation technicians also provide maintenance assistance, as needed.

Based on operating data, CGTF has consistently met performance criteria set forth in the ACD.

A minor release of untreated groundwater occurred in the last year at CGTF. The event involved a motor-operated valve that did not remain closed and this allowed some untreated water to drain into a storm water retention basin in the neighboring Pima Park. This incident was fully investigated and appropriate notifications were made. The motor-operated valves on the inlet to all three columns were replaced during the rehabilitation project.

In general, the facility appeared clean with no apparent leaks or significant deterioration. The equipment is clean, well marked, and well maintained.

The blowers on Columns 2 and 3 appeared to run smoothly. Again, the blower on Column 1 has had some high vibration issues that are still being investigated. The blowers are serviced during each GAC service event on the associated column.

Operating data collected after the rehabilitation project air flow rates up to 15,000 cubic feet per minute. Visual inspection through the viewports on the air stripper column during the inspection indicated relatively clean packing.

The minor amounts of condensate collected in the air handling system are primarily to the difference in temperatures between the air stripper offgas and ambient temperatures. The condensate is disposed in the sanitary sewer.

The process control system is monitored continuously. COS has implemented a program to test all switches and alarms on a routine basis.

The air handling system appeared tight and in good condition. The dehumidifiers have been operating satisfactorily since their upgrade in 2005.

4.4.2 Results

Based on the inspection at CGTF, no treatment performance problems, hazards, significant deterioration, or significant equipment malfunctions were apparent.

APPENDIX F

PRESENTATION MATERIALS DESCRIBING THE CENTRAL GROUNDWATER TREATMENT FACILITY PREVENTATIVE MAINTENANCE PROJECT

Treatment Facility Preventative Maintenance

North
Indian Bend Wash
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Treatment Facility Preventative Maintenance

Purpose of the Renovation Projects is to perform preventative and non-routine maintenance at the facilities to ensure flexibility, reliability, and proper treatment performance.

CGTF Preventative Maintenance

- CGTF has operated since 1994.
- Column modifications performed in 1998 and 2000.
- Design for preventative maintenance commenced in July 2006
- Construction completed in August 2007

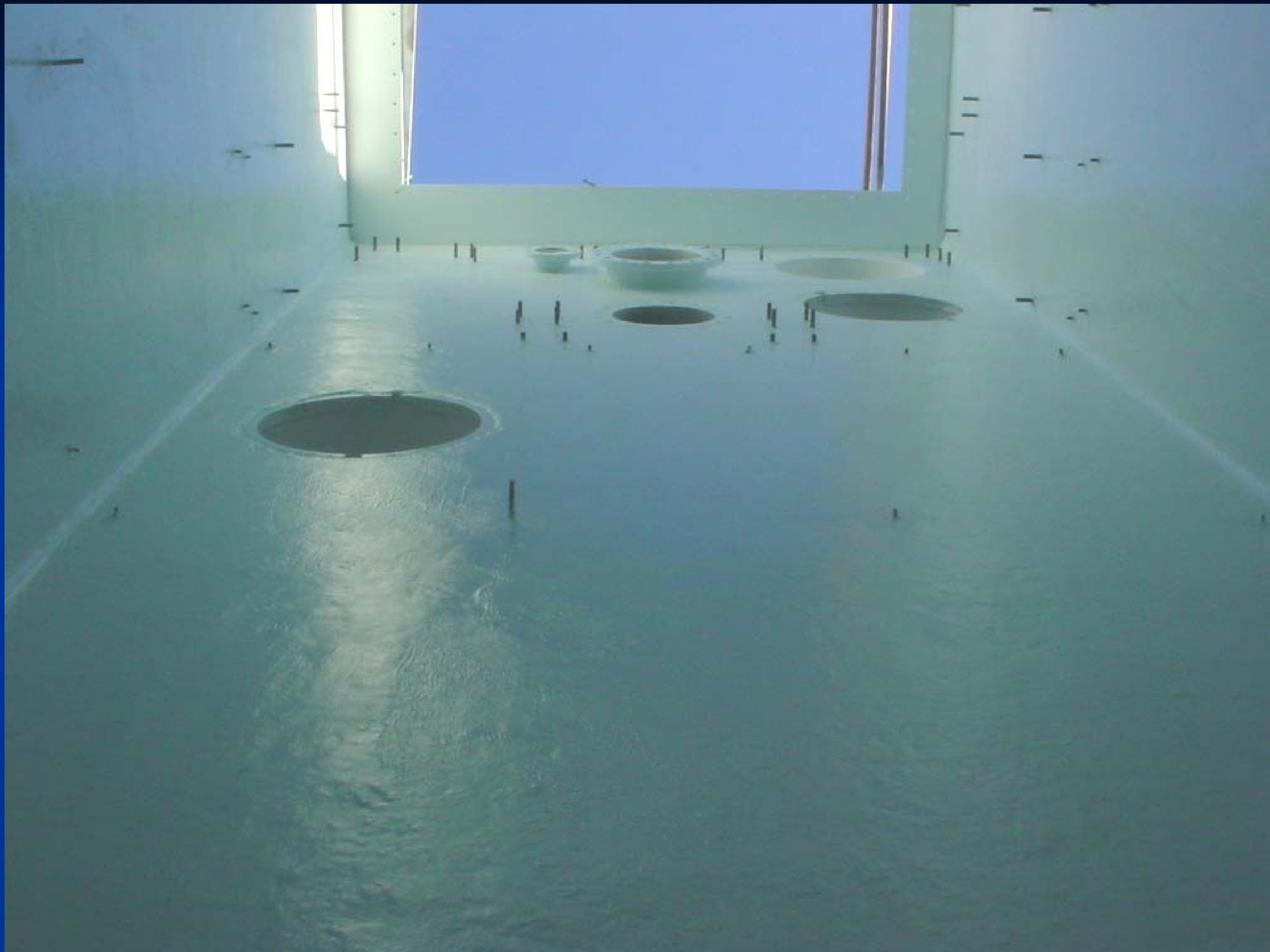
CGTF Preventative Maintenance

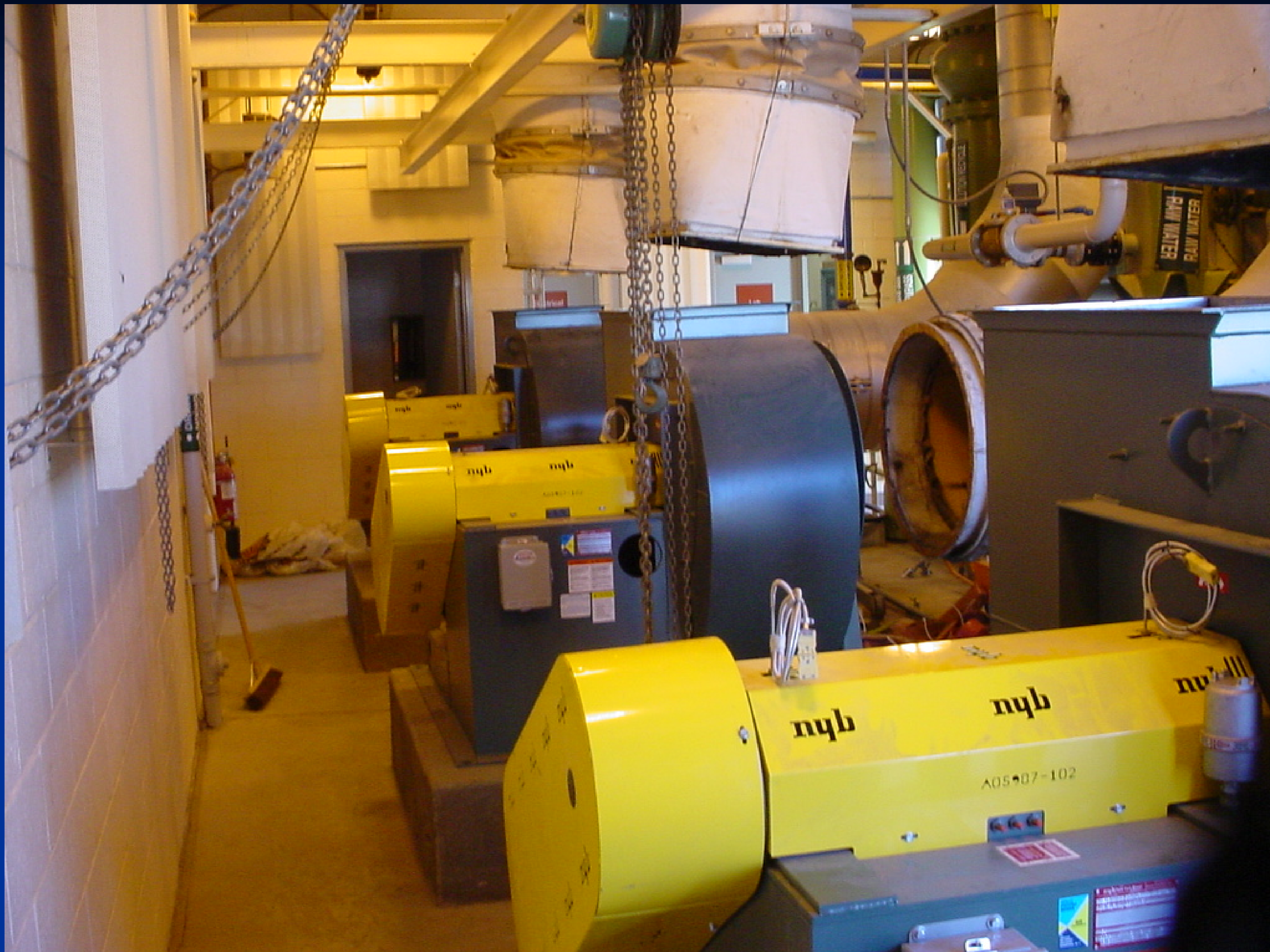
- Installation of raw water surge protection
- Relocation of raw water pipe from treated water sump
- Refurbish column internals and walls
- Upgrade air blower systems
- Upgrade column cleaning and discharge systems
- Facility exterior painting


TREATMENT BUILDING
WARNING CONFINED SPACE
26 8:56AM


IR


WARNING
CONFINED
SPACE
CAUTION
HIGH NOISE LEVEL
USE EAR PROTECTION
Blower
Room
PERSONS
ENTERING THIS
FACILITY
MUST SIGN IN
AT THE
CONTROL ROOM




nyb
nyb
A05?87-102
RAW WATER


WARNING

CGTF Preventative Maintenance

- NIBW Participating Companies worked in cooperation with City of Scottsdale to successfully complete the project
- Contractor Cost Paid by the PCs = $2,200,000
- Performance testing indicates facility meets performance goals

MRTF Preventative Maintenance

- Refurbish Column and Internals
- Manifold Modifications
- Instrument Upgrades
- Air Handling System Upgrades
- Facility Maintenance
- Scale Inhibitor Evaluation

MRTF Preventative Maintenance

- NIBW Participating Companies cooperating with Arizona American Water Company on design and construction

- Preliminary Estimated Project Cost = \$2,600,000 to be paid by the PCs

- Anticipated completion mid-2008.

Treatment Facility Preventative Maintenance

NIBW Participating Companies are committed to maintaining the treatment facilities to meet or exceed performance goals.

North Indian Bend Wash Superfund Site

APPENDIX G

ANNUAL GROUNDWATER PRODUCTION AND TCE TIME-SERIES DATA FOR NIBW EXTRACTION WELLS

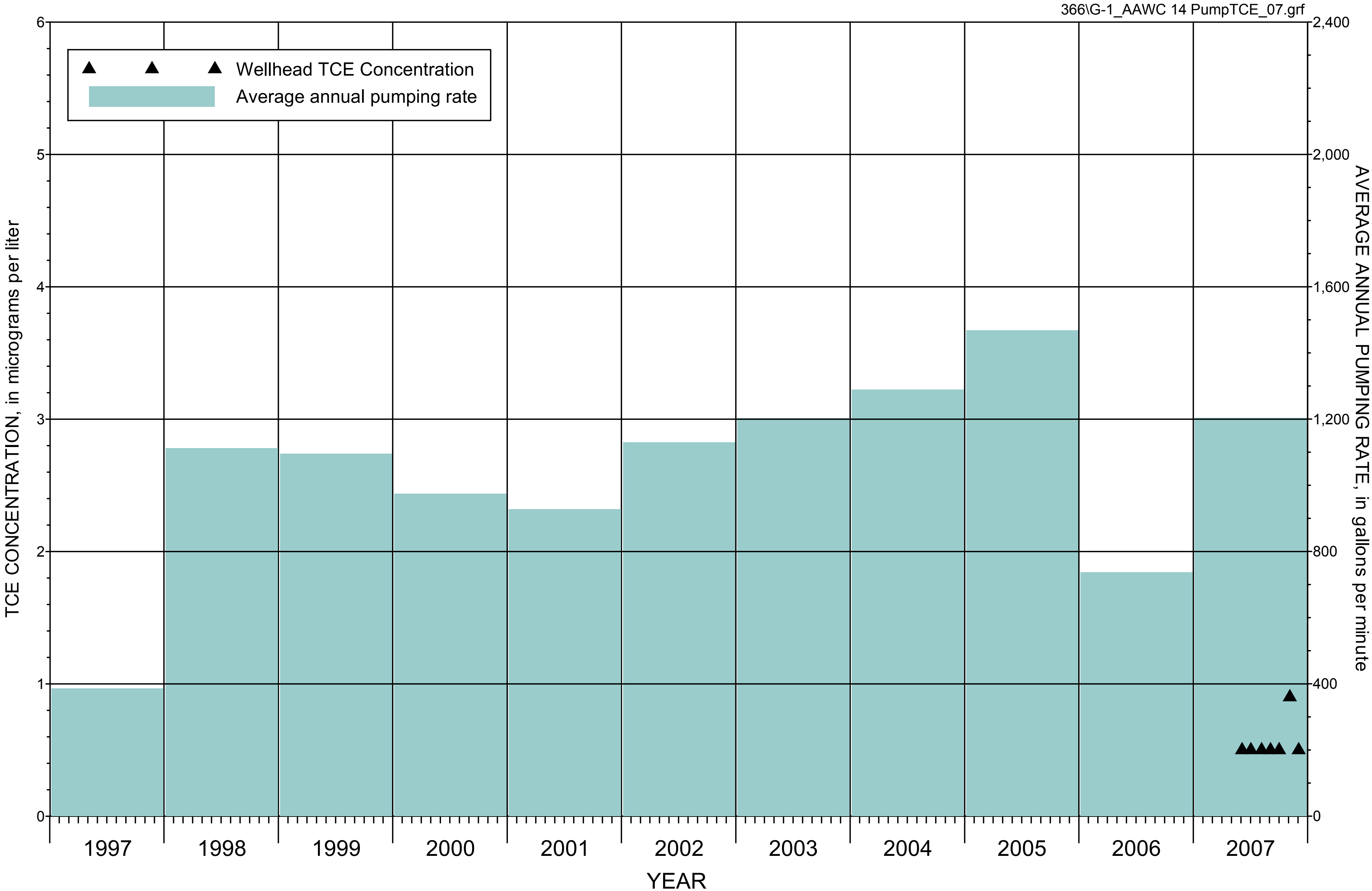


FIGURE G-1. CONCENTRATION OF TCE AND AVERAGE ANNUAL PUMPING RATE AT EXTRACTION WELL AAWC 14 1997 THROUGH 2007

Note: All values of 0.5 indicate lab results of 0.5 micrograms per liter or less.

North Indian Bend Wash Superfund Site

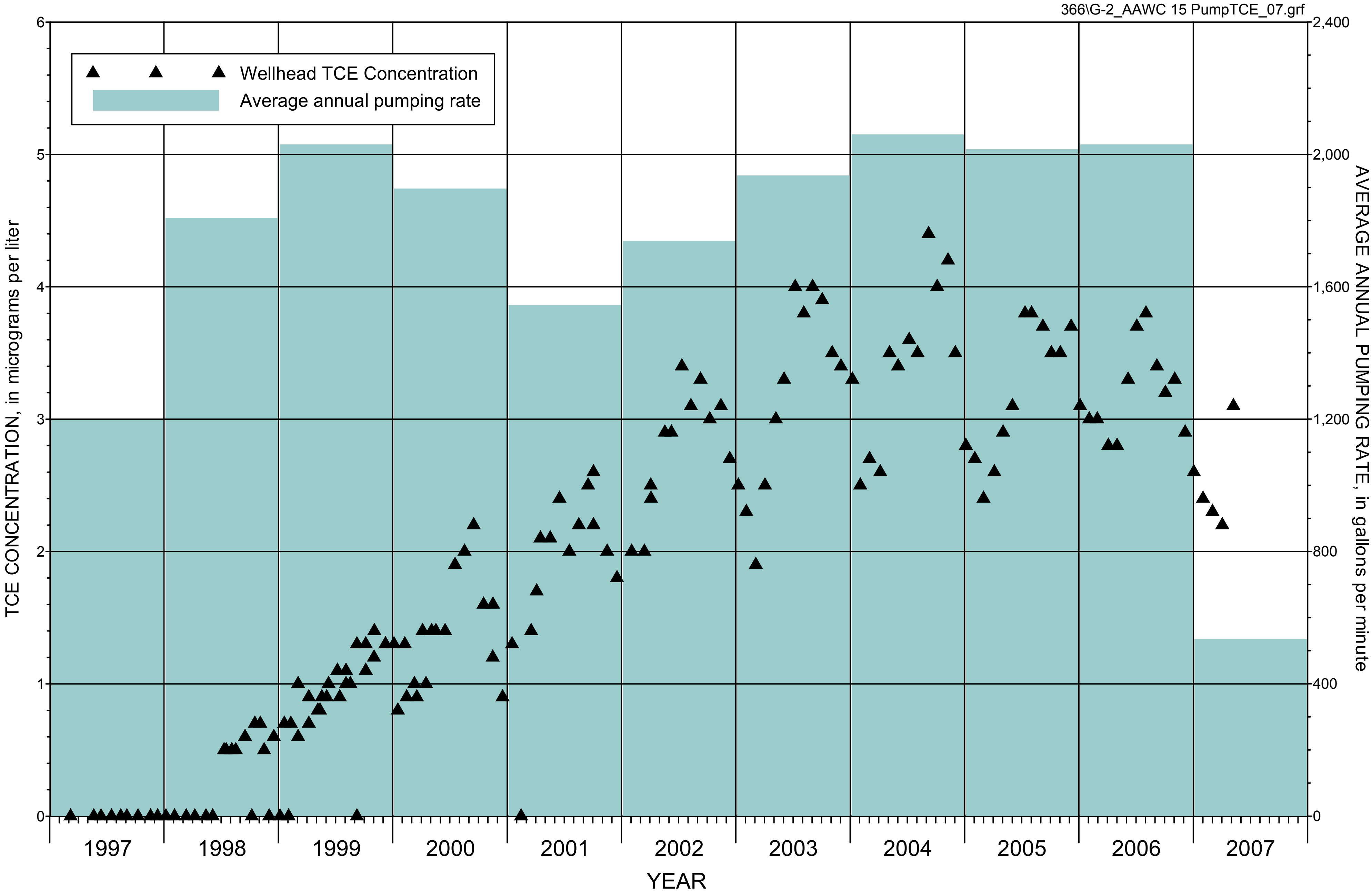


FIGURE G-2. CONCENTRATION OF TCE AND AVERAGE ANNUAL PUMPING RATE AT EXTRACTION WELL AAWC 15 1997 THROUGH 2007

North Indian Bend Wash Superfund Site

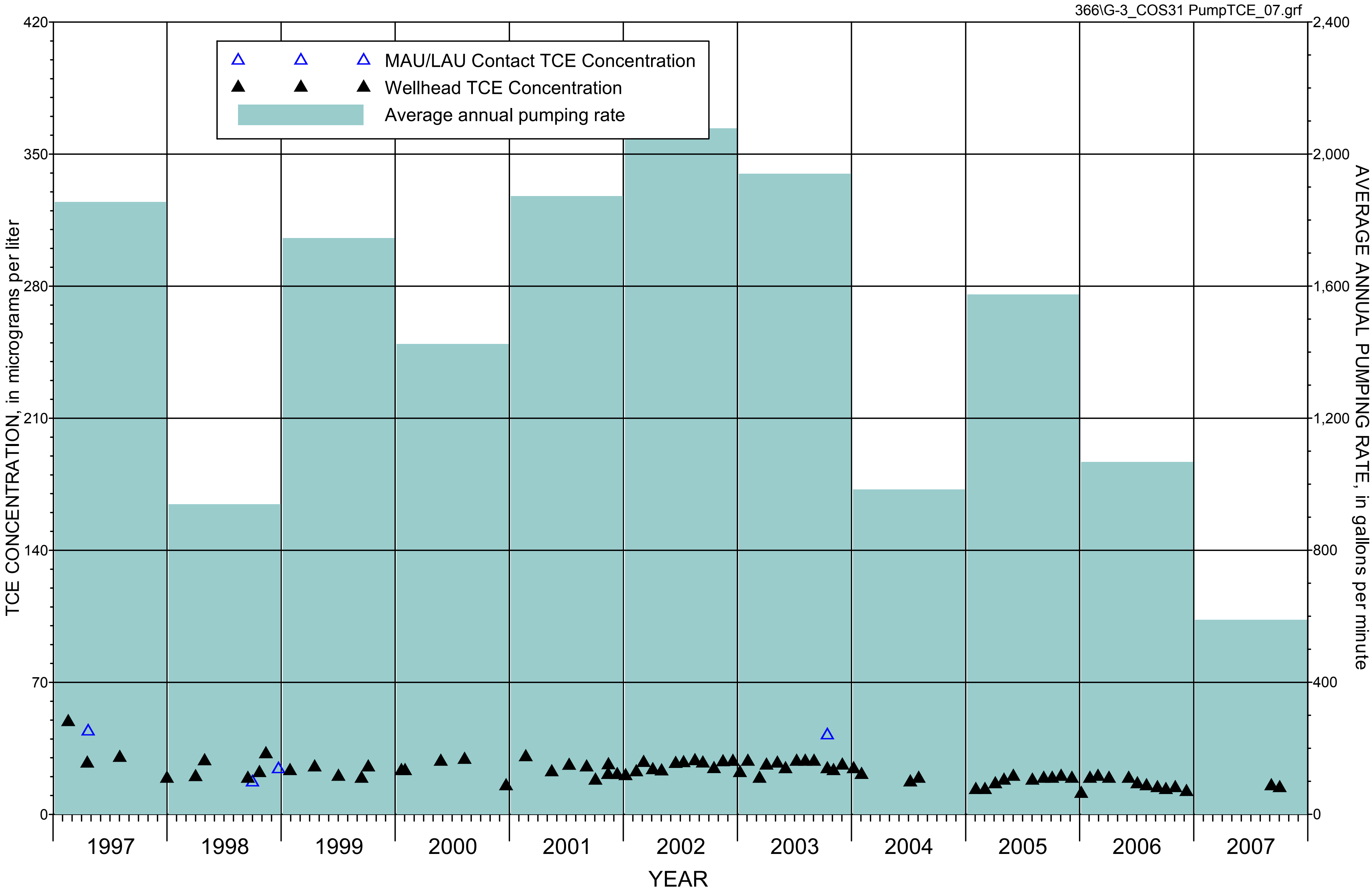


FIGURE G-3. CONCENTRATION OF TCE AND AVERAGE ANNUAL PUMPING RATE AT EXTRACTION WELL COS 31 1997 THROUGH 2007

North Indian Bend Wash Superfund Site

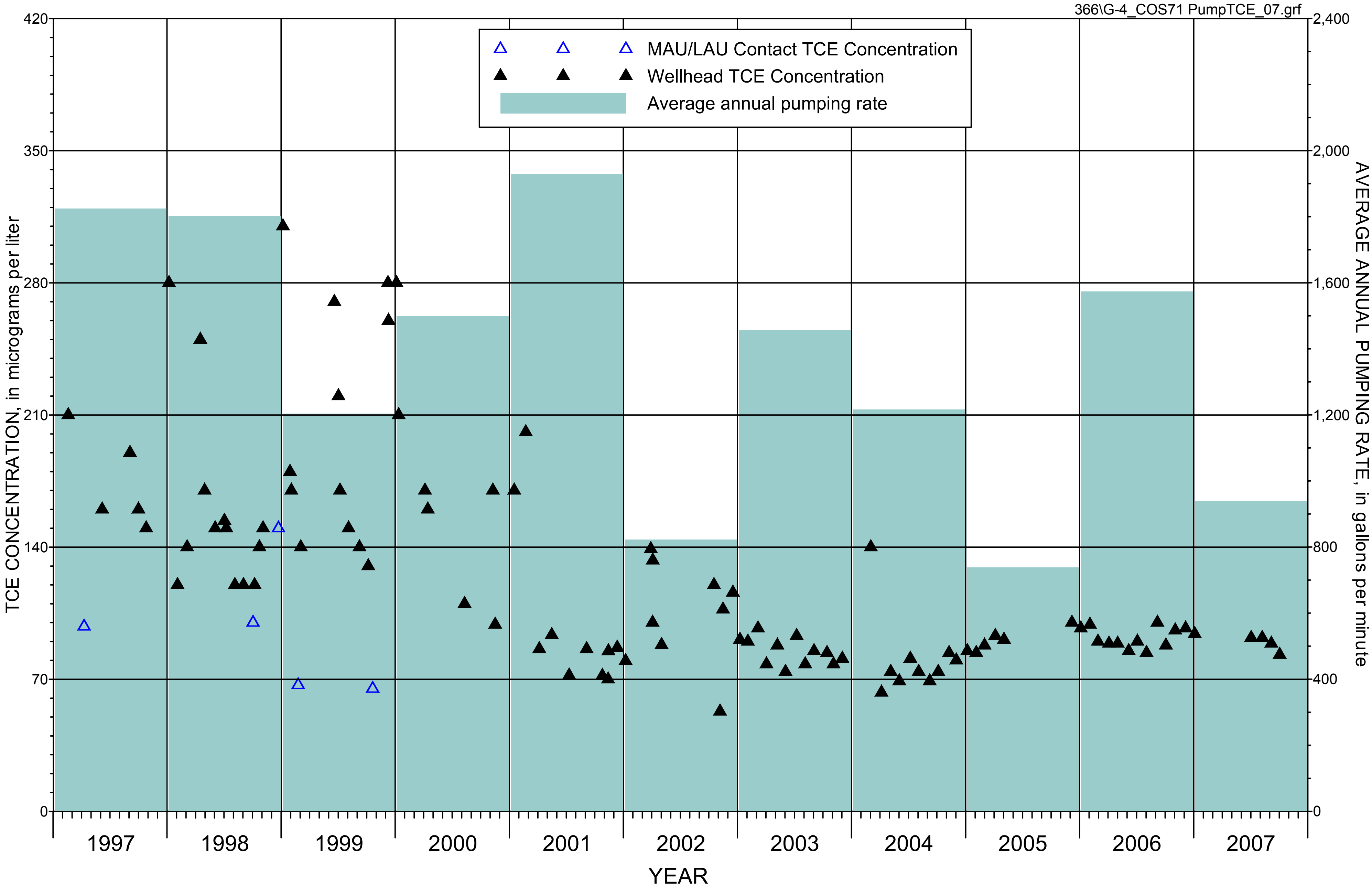


FIGURE G-4. CONCENTRATION OF TCE AND AVERAGE ANNUAL PUMPING RATE AT EXTRACTION WELL COS 71 1997 THROUGH 2007

North Indian Bend Wash Superfund Site

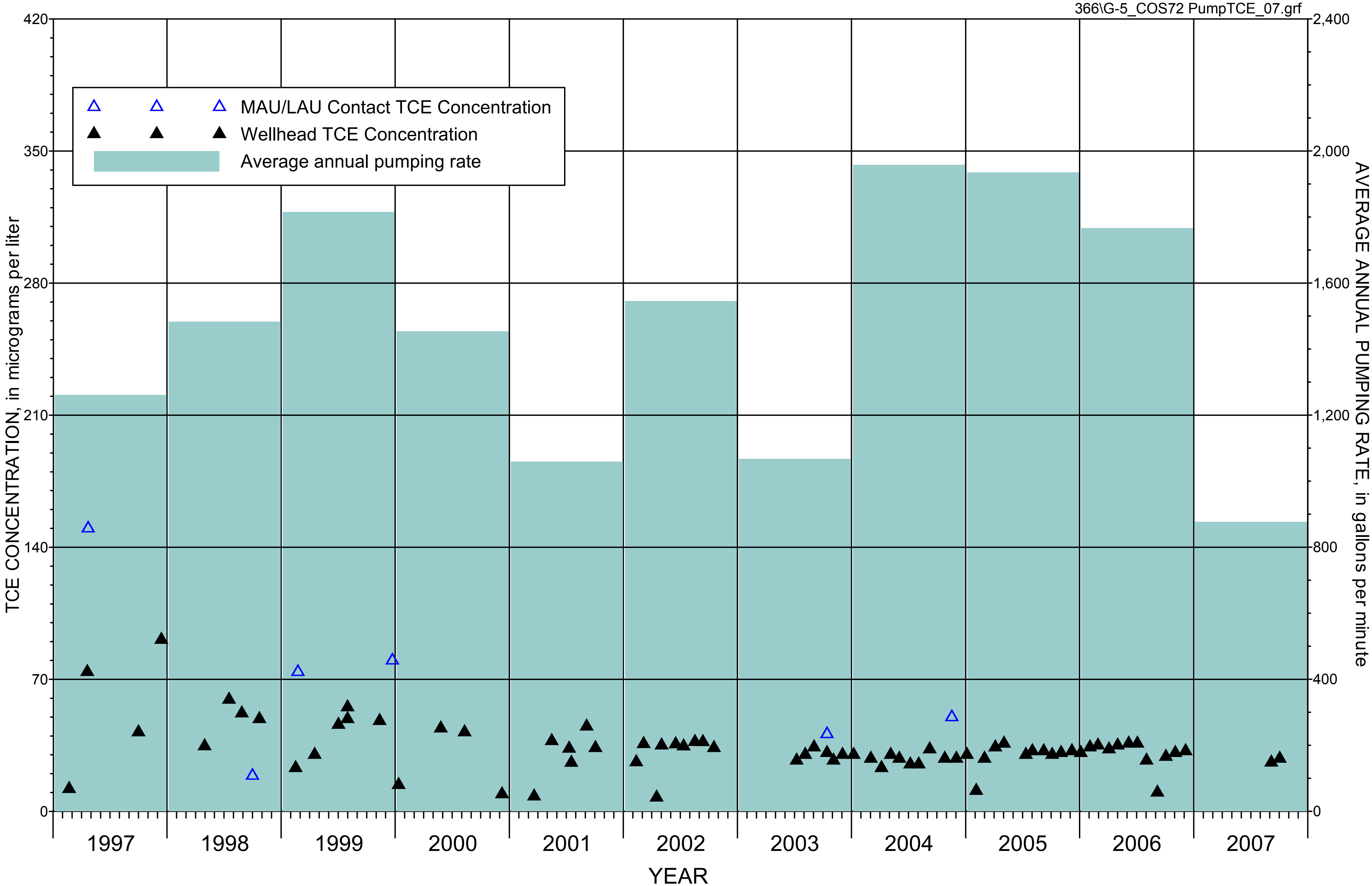


FIGURE G-5. CONCENTRATION OF TCE AND AVERAGE ANNUAL PUMPING RATE AT EXTRACTION WELL COS 72 1997 THROUGH 2007

North Indian Bend Wash Superfund Site

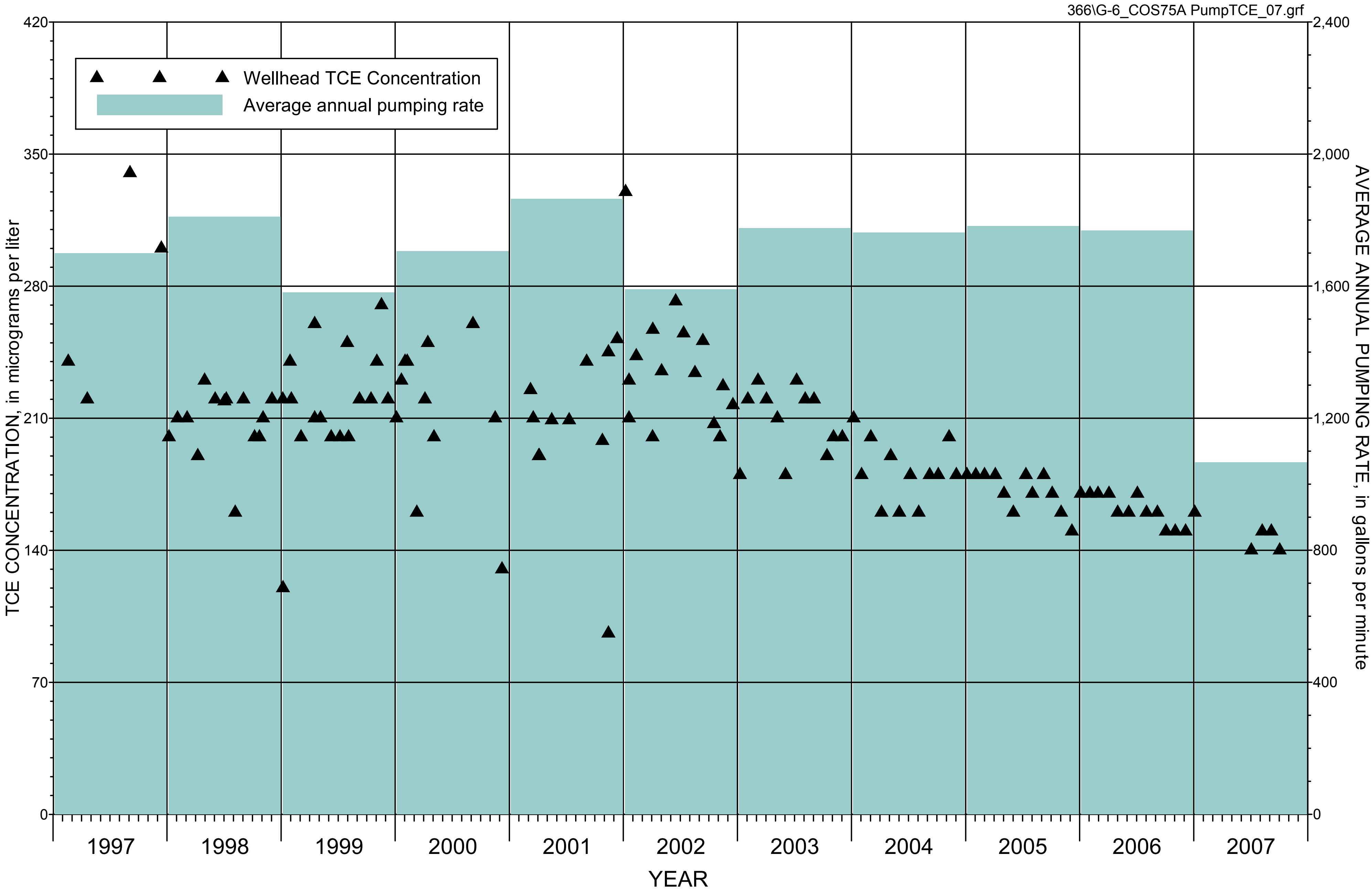


FIGURE G-6. CONCENTRATION OF TCE AND AVERAGE ANNUAL PUMPING RATE AT EXTRACTION WELL COS 75A 1997 THROUGH 2007

North Indian Bend Wash Superfund Site

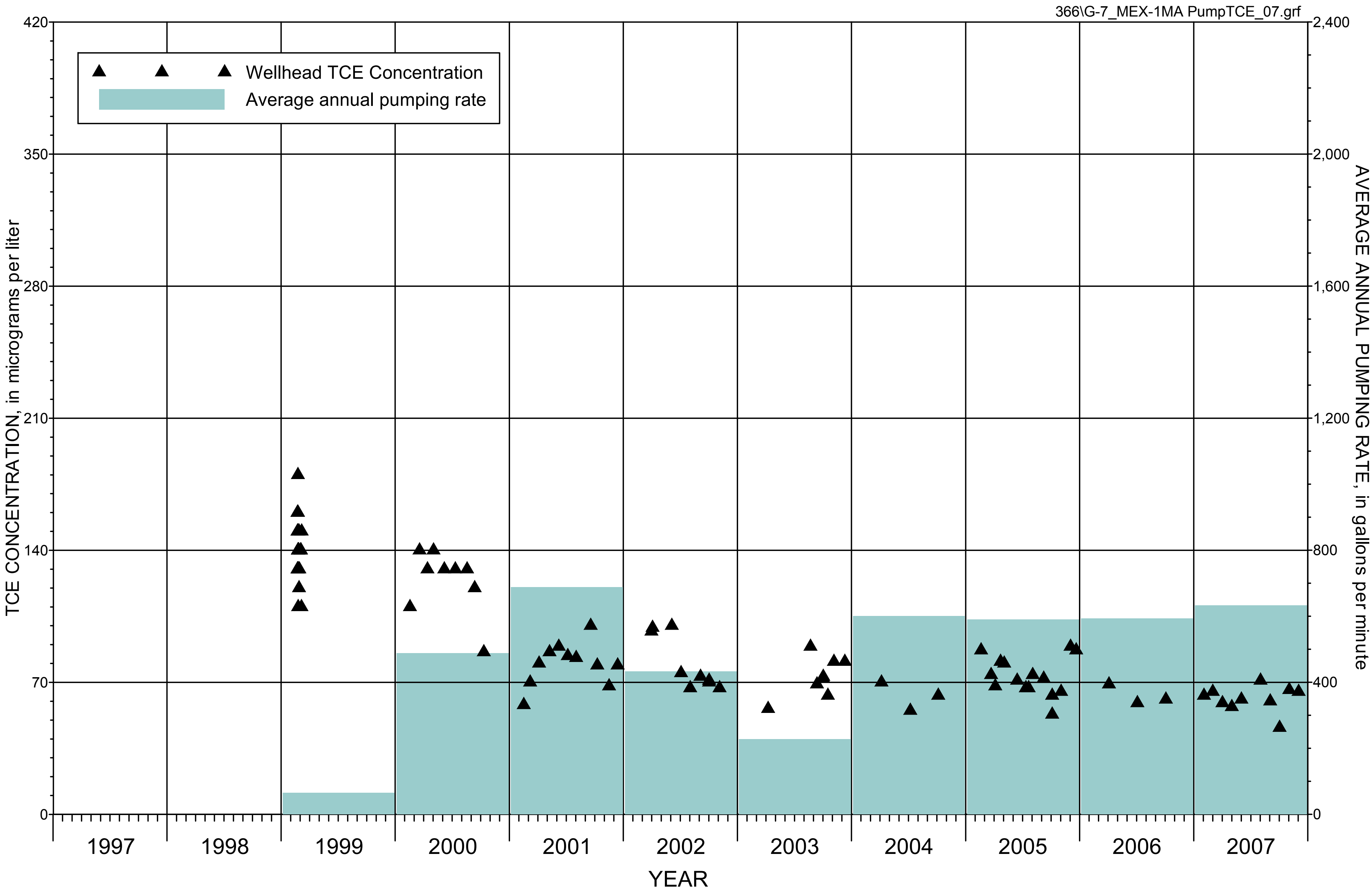


FIGURE G-7. CONCENTRATION OF TCE AND AVERAGE ANNUAL PUMPING RATE AT EXTRACTION WELL MEX-1MA 1997 THROUGH 2007

North Indian Bend Wash Superfund Site

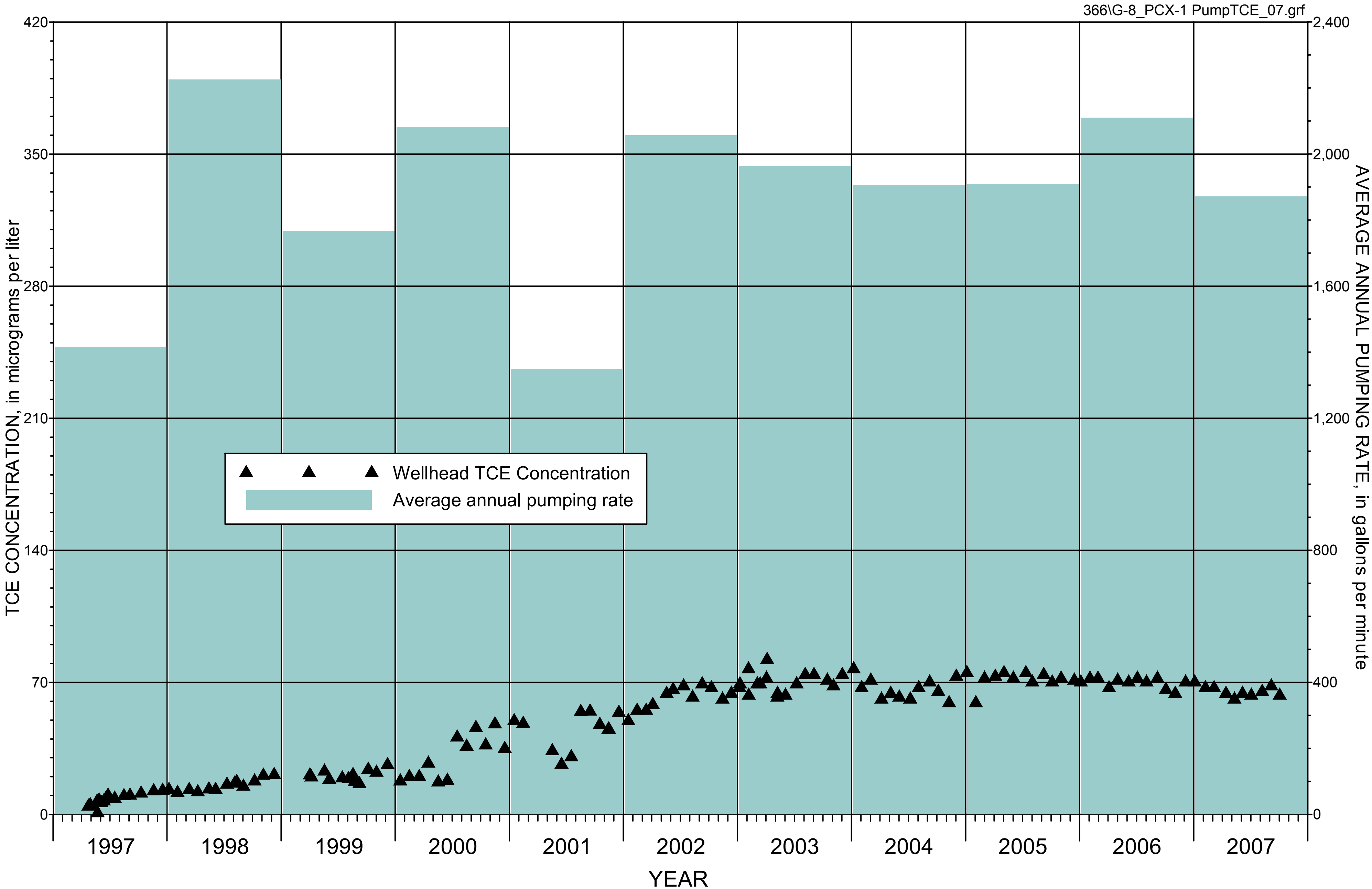


FIGURE G-8. CONCENTRATION OF TCE AND AVERAGE ANNUAL PUMPING RATE AT EXTRACTION WELL PCX-1 1997 THROUGH 2007

North Indian Bend Wash Superfund Site

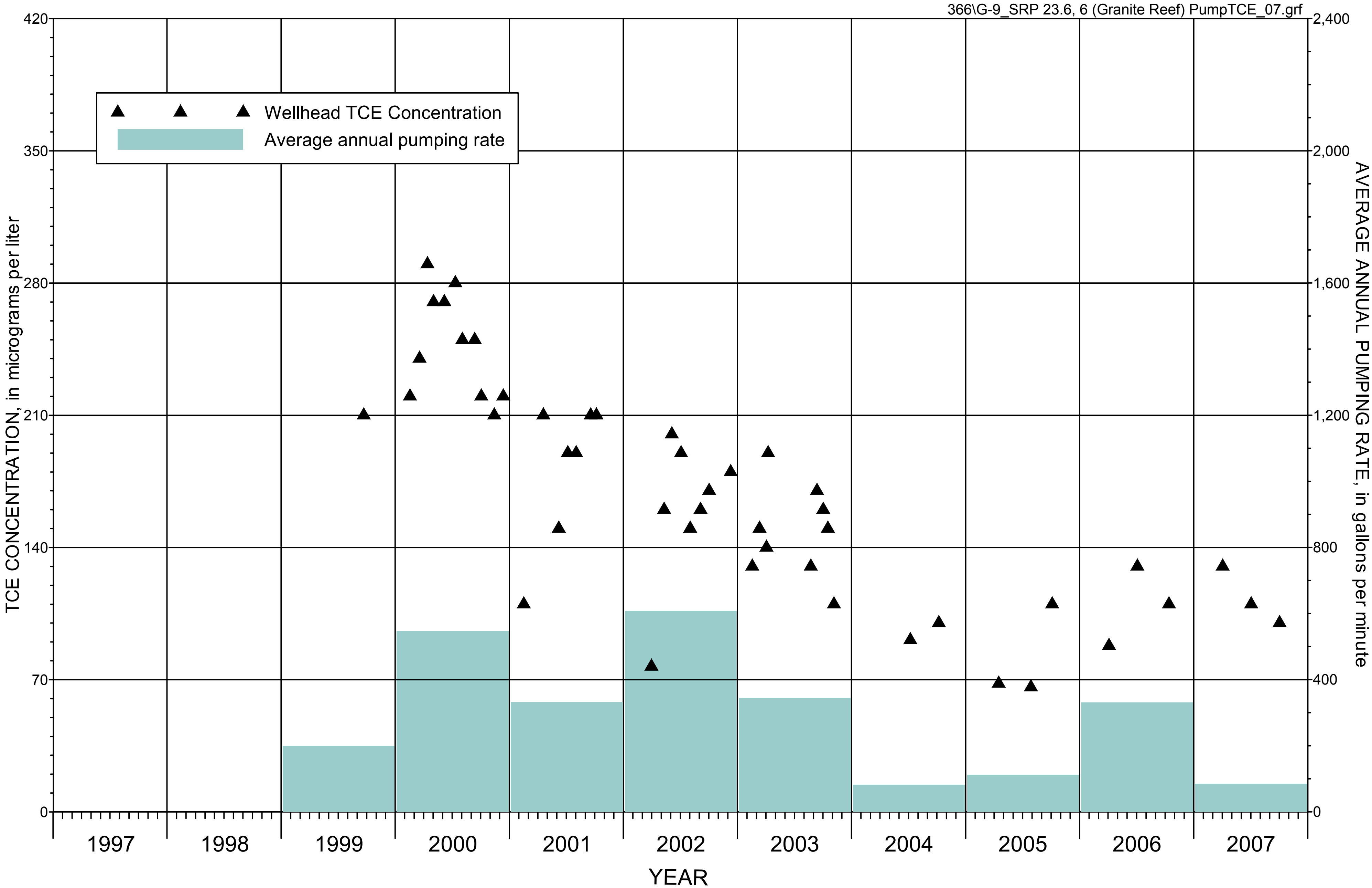


FIGURE G-9. CONCENTRATION OF TCE AND AVERAGE ANNUAL PUMPING RATE AT EXTRACTION WELL SRP 23.6E, 6N (GRANITE REEF), 1997 THROUGH 2007

North Indian Bend Wash Superfund Site

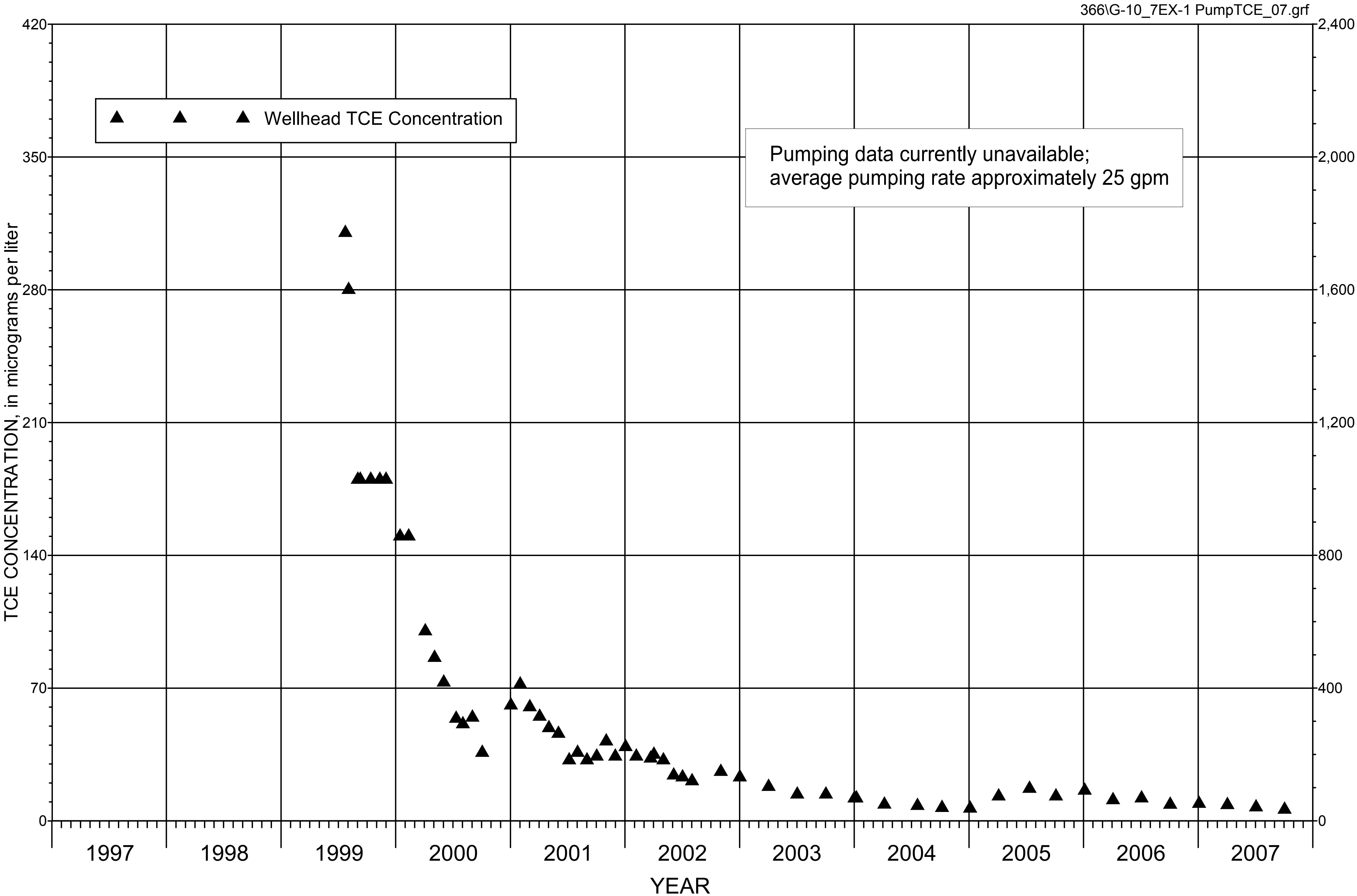


FIGURE G-10. CONCENTRATION OF TCE AND AVERAGE ANNUAL PUMPING RATE AT EXTRACTION WELL 7EX-1UA 1997 THROUGH 2007

North Indian Bend Wash Superfund Site

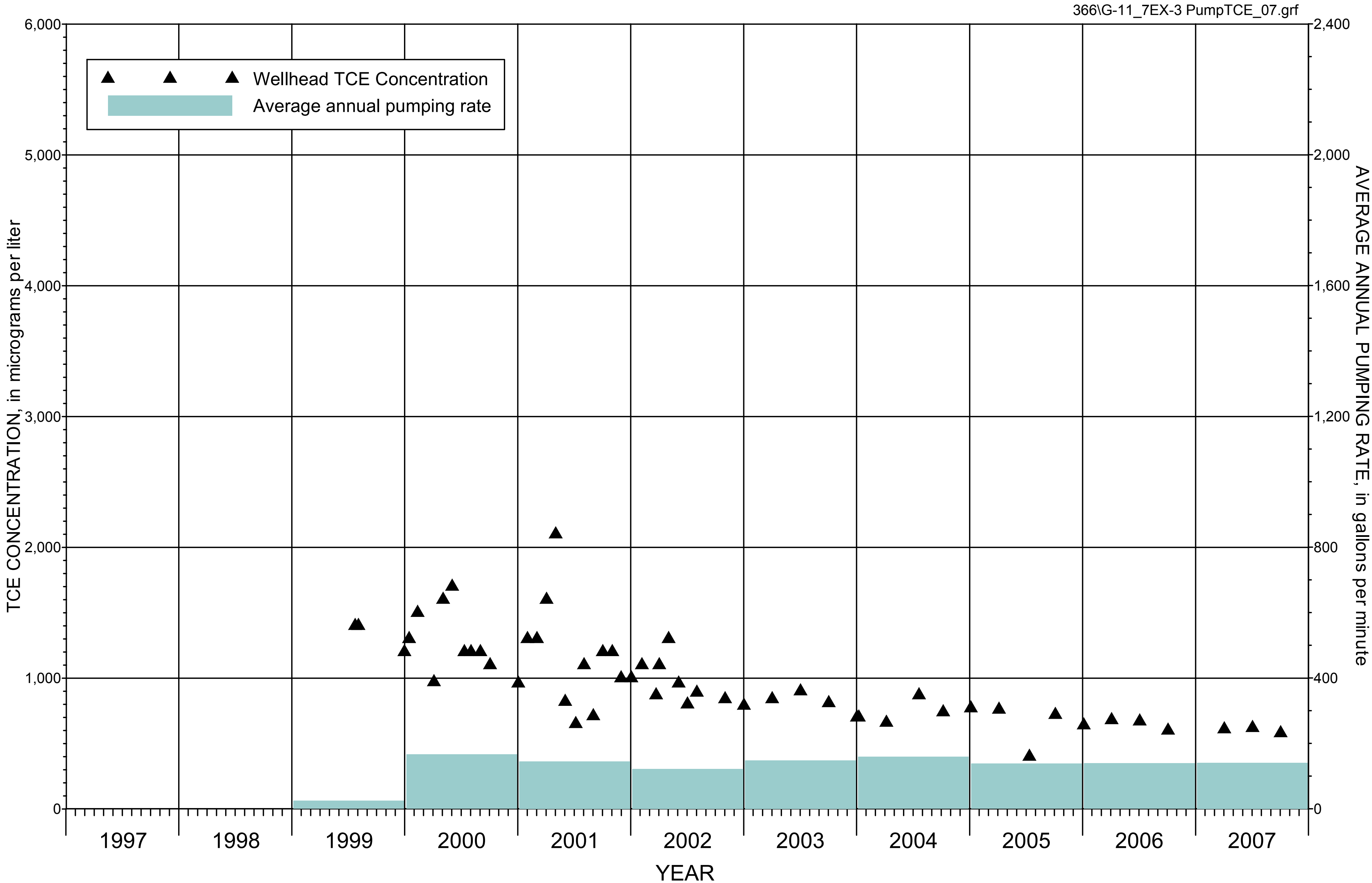


FIGURE G-11. CONCENTRATION OF TCE AND AVERAGE ANNUAL PUMPING RATE AT EXTRACTION WELL 7EX-3MA 1997 THROUGH 2007

North Indian Bend Wash Superfund Site

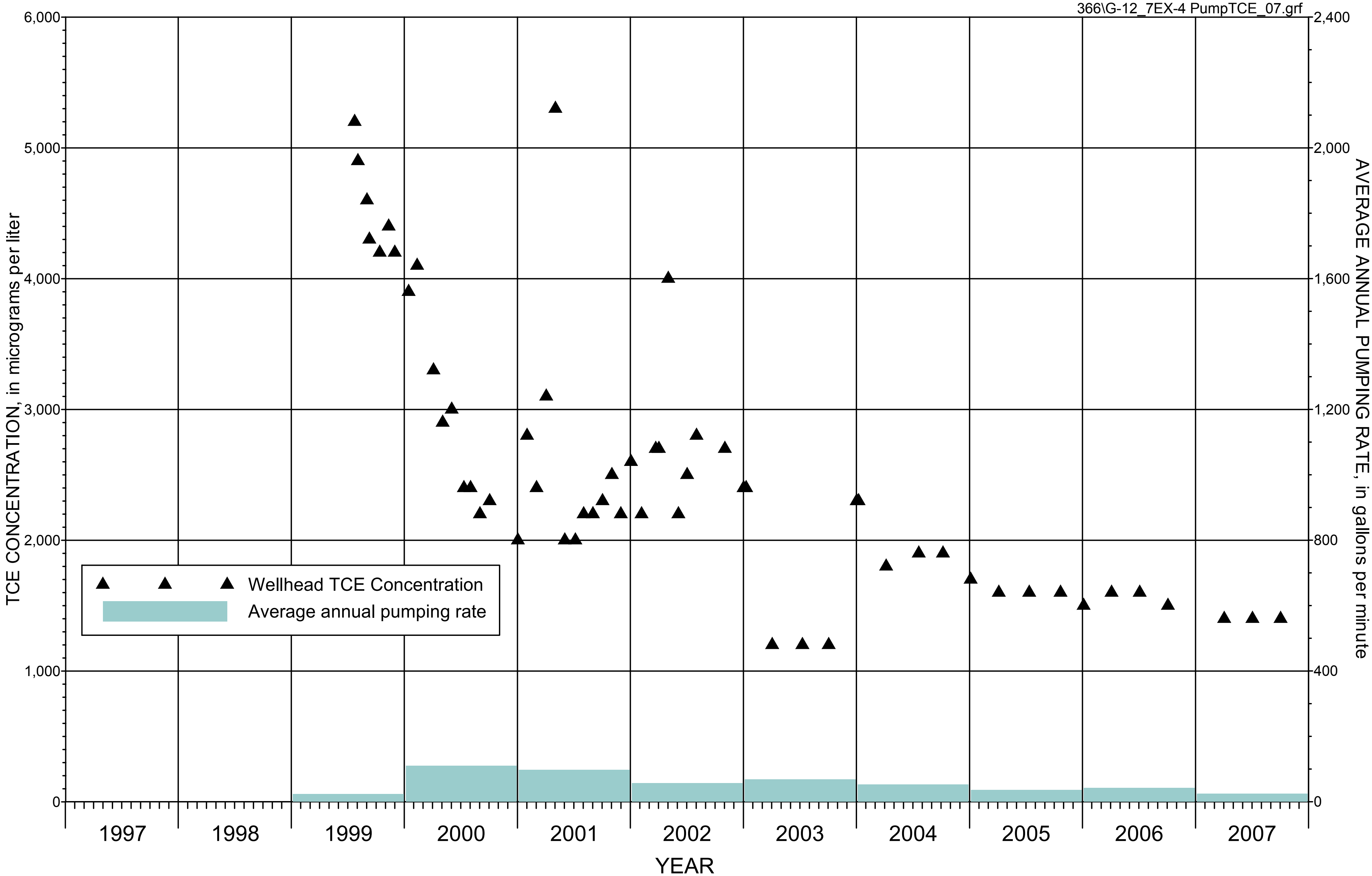


FIGURE G-12. CONCENTRATION OF TCE AND AVERAGE ANNUAL PUMPING RATE AT EXTRACTION WELL 7EX-4MA 1997 THROUGH 2007

North Indian Bend Wash Superfund Site

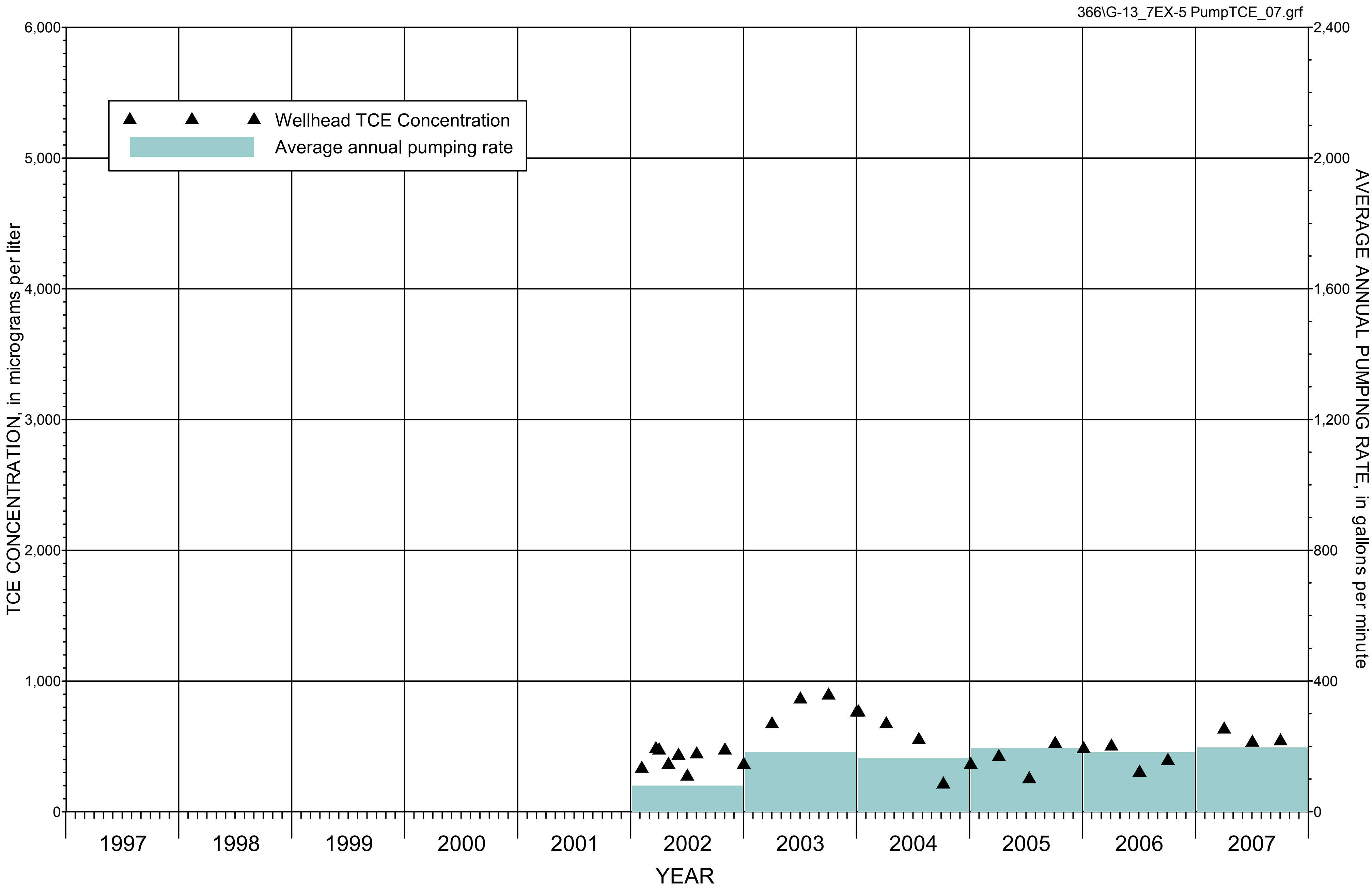


FIGURE G-13. CONCENTRATION OF TCE AND AVERAGE ANNUAL PUMPING RATE AT EXTRACTION WELL 7EX-5MA 1997 THROUGH 2007

North Indian Bend Wash Superfund Site